

# WHAT TO EXPECT ON THE ISEE



**ISEE**<sup>®</sup> INDEPENDENT SCHOOL  
ENTRANCE EXAM

**MIDDLE LEVEL: CANDIDATES FOR GRADES 7 and 8**

The only authorized guide produced by ERB





# WHAT TO EXPECT ON THE ISEE

A PREPARATION BOOK FOR STUDENTS  
AND THEIR PARENTS

*Middle Level*



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Dear Student,

You are probably going to be taking the Independent School Entrance Exam (ISEE) sometime soon, and we hope that this book will help you in preparing for this experience.

This book is intended to help you become familiar with the ISEE. The questions that you will see in the “Sample Questions” and the “Practice Test” sections are not the same questions that you will find on the real test, but they are similar to those questions and have been written by the same people who wrote the actual ISEE. You will also have a chance to become familiar with the exact directions on the test. Even the answer sheets we have included are the same!

Please be sure to read the test directions on page 71 and the explanation of your score report on pages 133–139, since the ISEE may be different from other tests you have taken in the past.

We hope that after spending some time with this book, you will know more about what to expect on your test day and feel comfortable with the types of questions, the directions, and the answer sheet on the ISEE. We wish you and your family the best of luck as you embark on this exciting educational adventure.

With warm regards,

The ISEE Staff



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**INTRODUCTION**

**TO THE**

**ISEE<sup>®</sup>**

**MIDDLE LEVEL**



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## Background Information

### What Is the ISEE?

The Independent School Entrance Exam (ISEE) is an admission test developed by the Educational Records Bureau for its member schools as part of their admission process. The ISEE was created by Measurement Incorporated, Durham, NC, and ERB, with assistance from faculty of ERB member schools.

The current edition has been updated to include the educational assessment best practices and to align with national standards in English and mathematics as articulated in standards adopted by the National Council of Teachers of English (NCTE) and the National Council of Teachers of Mathematics (NCTM). Nearly two-thirds of the questions on the ISEE were developed by ERB-member faculty and administrators from a cross section of independent schools across the United States under the direction of test development specialists at Measurement Incorporated.

The ISEE is the admission test of choice for many independent schools throughout the country and abroad. Test sites are available in numerous cities during the admission testing season. The ISEE consists of five sections at three levels designed to measure the verbal and quantitative reasoning and achievement of students in grades 4–11 seeking admission to grades 5–12 in independent schools. Students seeking admission to grades 5 or 6 take the Lower Level; students seeking admission to grades 7 or 8 take the Middle Level; and students seeking admission to grades 9–12 take the Upper Level.

Students may register to take the ISEE up to three times in a 12-month admission cycle, once in any or all of the three testing seasons. The seasons are Fall (August–November), Winter (December–March), and Spring/Summer (April–July). ISEE does not encourage multiple testing, but we do offer students and families that option.

The five sections that make up the ISEE are (in order of testing): **Verbal Reasoning, Quantitative Reasoning, Reading Comprehension, Mathematics Achievement**, and an **Essay** which is written by the student in his or her own handwriting in response to a given writing prompt. Each section is designed to tap into a unique aspect of a student's preparation for academic work.

The first four sections consist entirely of multiple-choice questions. Results are reported in percentile ranks; that is, each student's performance is measured against a norm group made up of students applying to independent schools in the same grade who have tested over the past three years. The essay is not scored but sent directly to the school(s) to which the student has applied, along with the score report. More will be said about how the test is scored on pages 18–20.

### How Does a Student Arrange To Take the ISEE?

Students may take the ISEE in one of the following ways:

1. The ISEE is given by consortia of schools in cities throughout the United States where schools have joined together and have chosen to use a common entrance test program.

2. The ISEE is given at individual school test sites at a wide variety of schools throughout the country and abroad and on a number of test dates.
3. The ISEE offers a variety of testing options. We are pleased to offer the ISEE in both a paper-pencil and an online format at ISEE test site schools, ISEE testing offices, and Prometric Test Centers.

Complete registration information may be found in the *ISEE Student Guide*, which is updated each year and is available from the independent schools who administer the test. For online registration information, visit [www.iseetest.org](http://www.iseetest.org).

### What Types of Questions Are on the ISEE?

The first four sections are composed of multiple-choice questions. The fifth section, the essay, is not scored but requires the student to respond in his or her own handwriting to a preselected writing prompt.

The first two sections, **Verbal Reasoning** and **Quantitative Reasoning**, measure the applicant's reasoning ability.

- The Middle Level **Verbal Reasoning** section consists of two types of items: vocabulary and sentence completion. Each vocabulary item consists of an abstract, grade-level appropriate word followed by four possible answer choices. Each sentence completion item consists of a sentence with one missing word followed by four potential answer choices. A student must select the word that most appropriately completes the context of the sentence.
- At the Middle Level, the **Quantitative Reasoning** section consists of word problems and quantitative comparisons. The word problems differ somewhat from traditional mathematics achievement items in that some of them require either no calculation or simple calculation. The quantitative comparison items present two quantities, (A) and (B), and ask the student to select one of the following four answer choices:
  - (A) The quantity in Column A is greater.
  - (B) The quantity in Column B is greater.
  - (C) The two quantities are equal.
  - (D) The relationship cannot be determined from the information given.

The next two sections, **Reading Comprehension** and **Mathematics Achievement**, measure the applicant's ability to correctly answer curriculum-based concepts that are appropriate at that grade level according to curriculum standards adopted by the National Council of Teachers of English (NCTE) and the National Council of Teachers of Mathematics (NCTM).

- In order to determine a student's reading comprehension skills, in the **Reading Comprehension** section, the student is asked to read a passage and then answer items specific to that passage.

The six passages in this section are age-appropriate and length-appropriate. Each passage is especially written to contain contemporary information and to be of high interest to students in the middle grades. The passages cover a variety of subject areas including arts, contemporary life, history, and science.

- **Mathematics Achievement** items conform to national mathematics standards and ask the student to identify the problem and find a solution to a problem. The items require one or more steps in calculating the answer.

The **Essay** is written by the student in response to a writing “prompt” or topic that is grade-level appropriate. The prompts rotate throughout the testing season. They are designed to prompt a student to write an informed essay on a particular topic. As is true of the passages in the **Reading Comprehension** section, these prompts have been written for a contemporary feel and a high level of interest to current students. Each prompt is free of bias, global in scope, and representative of a wide variety of subjects. Each prompt is one or two sentences long and asks students to respond to the situation described. Prompts may relate to the student, to the student’s community, or to the world in general.

ERB does not score the written essay. They send a copy of the essay to the school(s) designated in the ISEE registration along with the scores for the rest of the test. They do not send a copy of the essay to the parents.

## Information for Students

### Why Is the ISEE Required?

The school you are applying to has requested ISEE scores as part of the overall admissions process. By requiring an admission test for all students entering the same grade, the school can view one common item of all applicants. The school looks at many items in conjunction with the ISEE scores, including your application, your current school records, and possibly an interview. All components of the admission process, including the ISEE scores, help the school, you, and your family determine the best school match for you.

### What Happens to My Scores?

After you take the ISEE, the test site will send your answers to the ISEE Operations Office for scoring of the four multiple-choice sections and production of the Individual Student Report (ISR). The ISR is posted to your family's account right after scoring and an email is then sent to notify your family that this has taken place. The essay, which is not scored and not released to the family, is released online (with the ISR) to ERB member schools. School reports do not list any recipients other than the individual school receiving the report.

### How Will This Book Help Me?

Unlike other ISEE test preparation materials, this book was written by the same people who developed the ISEE. The sample questions and practice test questions in this book include actual questions from previous versions of the ISEE. Use this book to

- see what the ISEE looks like and how it is structured;
- read sample questions and answers with an explanation of each correct answer choice;
- read the exact directions that you will be given when you take the ISEE;
- take a practice test that has questions like those on the real ISEE; and
- use an answer sheet like the one you will use when you take the ISEE.

We hope that working through this book will make you feel even more confident and prepared when you take the ISEE because you will know what to expect.

## Information for Adults

### How This Book Can Help Your Student Prepare for the ISEE

The information in this book offers your student an opportunity to become familiar with all aspects of the ISEE. It is particularly helpful because the sample questions and practice test questions were either chosen from previous editions of the ISEE or were written by ERB-member school faculty and administrators and by experts in test development. Using this book will allow your student to

- read and answer sample questions, check for the correct answers, and then read the explanations for why the answers are correct;
- take a practice test that contains questions similar to those on the actual ISEE, see a sample answer sheet that is like the answer sheet on the real test, and read the actual directions he or she will receive on the day of the test; and
- score the practice test and compare that score with those of other students who took the actual ISEE.

### How You Can Help Your Student Prepare for the ISEE

There are specific ways you may help prepare your student, not only for the ISEE, but for other standardized tests as well.

- Show confidence in your student's ability to do well on the ISEE.
- Remind your student that the ISEE is just one piece of information a school will use in its admission process.
- Mark the test date on your calendar so that both you and your student are aware of the date.
- Make sure that your student gets a good night's sleep before the test.
- Make sure that your student eats a healthy breakfast before the test.
- Encourage your student to read as part of his or her daily routine. By reading new materials, your student will be exposed to new concepts and vocabulary.

### Reminders for Your Student

Remind your student to employ the following helpful strategies when answering multiple-choice questions.

- Read the entire question before attempting to answer it.
- Try to answer the question without looking at the choices. Then, look at the choices to see if your answer is the same as, or close to, one of the choices. Wherever possible, answer choices on this test are arranged alphabetically, numerically, or by length of the answer to help the student locate the correct answer more quickly.
- Next, eliminate answers you know are not correct.
- Finally, choose the correct answer. If necessary, make an educated guess from the remaining choices, since there is no penalty for incorrect responses.



## Frequently Asked Questions

**Q: Which level of the ISEE does my student take?**

**A:** There are three levels of the ISEE.

- Students currently in grades 4 and 5 (applicants to grades 5 or 6) take the Lower Level.
- Students currently in grades 6 and 7 (applicants to grades 7 or 8) take the Middle Level.
- Students currently in grades 8 and above (applicants to grades 9–12) take the Upper Level.

**Q: Are there multiple versions of the ISEE?**

**A:** At each of the three levels, there are several different, but equivalent, forms. The specific forms to be used each year will be determined in advance by ERB. These forms are randomly assigned to the students and are statistically equivalent, regardless of which form was actually taken by the student.

**Q: How is the ISEE structured?**

**A:** Each level and each form of the ISEE has five sections. The sections are administered in the following order:

- Verbal Reasoning
- Quantitative Reasoning
- Reading Comprehension
- Mathematics Achievement
- Essay

The sections and the essay are explained more fully in the next part of this book.

**Q: What can my student expect at the test site on the day of the test?**

**A:** Students will present their verification letter or identification to be checked in upon arrival. So that your child may concentrate on doing his or her best on the ISEE, schools do not conduct admission activities or highlight their schools on the day of testing. We know that testing may be stressful for some students; therefore, the test administrators are teachers or other school personnel who teach or interact with children on a daily basis. Although test administrators may not discuss test questions during the test, they give clear test directions, and your child is encouraged to ask for clarification, if necessary, before beginning each section of the test.

**Q: What types of questions are on the ISEE?**

**A:** The Verbal Reasoning, Quantitative Reasoning, Reading Comprehension, and Mathematics Achievement sections contain only multiple-choice questions. Each question has four choices. Only one answer is the correct or “best” answer. The Essay section requires the student to write an essay in response to a prompt. There are over one hundred writing prompts (topics) that have been developed for each level of the ISEE. A different topic is selected by ERB for each test administration throughout the year.

**Q: How much time will be allotted for each section of the actual Middle Level ISEE?**

**A:**

**TIME ALLOTTED FOR EACH SECTION  
ON THE ACTUAL MIDDLE LEVEL ISEE**

Section	Number of Questions	Time Allotted (in minutes)
Verbal Reasoning	40	20
Quantitative Reasoning	37	35
Reading Comprehension	36	35
Mathematics Achievement	47	40
Essay	1 prompt	30
	<b>Total Time</b>	<b>160</b>

Each section of the ISEE (excluding the essay) contains several questions that will not be scored but may be used on future editions of the ISEE.

**Q: Are there any scheduled breaks during the test?**

**A:** There are two breaks—one following the Quantitative Reasoning section and another following the Mathematics Achievement section. Each break is five to ten minutes long.

**Q: I am confused by these acronyms: ERB, ISEE, CTP. Didn't my student take one of these already this year?**

**A:** The Educational Records Bureau (ERB) oversees both the Independent School Entrance Exam (ISEE) and the Comprehensive Testing Program (CTP). The ISEE is a test designed to help admission directors at selected public and independent schools decide who will be accepted for admission to their schools, while the CTP is a battery of tests designed to collect information about student achievement for students currently enrolled in grades 1–10.

Both the ISEE and the CTP test student abilities in Verbal Reasoning, Reading Comprehension, Quantitative Reasoning, and Mathematics. They also contain similar types of items. Therefore, it is quite possible that your student may be somewhat familiar with the types of questions on the ISEE if he or she has previously taken the CTP. However, it is important to note that there is no repeat of specific items between the two tests. The ISEE is unique in that it is used for admission purposes only and its norms are based only on applicants to independent schools.

**Q: Are there other books or programs that might help my student improve on the ISEE?**

**A:** This is the only book approved by ERB. It was written in conjunction with the test developer, Measurement Incorporated. This book contains current and accurate information.

Since this book was written by the developer of the actual test, the sample questions and practice test questions were chosen to accurately reflect the format and the kinds of content your student will see on the actual ISEE. You may see programs or materials advertised that claim to help; however, none of them are approved by ERB, nor can they claim the intimate knowledge of the actual test questions used on this edition.

**Q: What materials does my student need to bring to the actual ISEE?**

**A:** For paper testing only, students should bring four #2 pencils and two pens with either blue or black ink. Students may choose to use erasable ink.

**Q: Are there materials that my student is prohibited from using during the ISEE?**

**A:** Most materials other than writing implements are prohibited. Specifically, **scratch paper, calculators, calculator watches, rulers, protractors, compasses, dictionaries, and thesauruses** are **NOT** permitted during the actual test.

**Cell phones and other electronic devices (iPods, MP3s, beepers, etc.) are not permitted** at the test site and must not be brought into the testing room. If a student uses any of these items during the exam, his or her exam will be invalidated. Since students are not permitted to use these devices on the actual test, it is recommended that they avoid using them when they answer the sample test questions or take the practice test. A certain number of these restrictions may be waived for students who receive testing accommodations due to documented disabilities.

**Q: Are testing accommodations made if my student requires them?**

**A:** Accommodations may be made for students with documented learning differences or physical challenges. Accommodation use in school and supporting documentation of the disability are required. For more information, please go to [www.iseetest.org](http://www.iseetest.org) and click on "Accommodations."

**Q: Will my student be penalized for a wrong answer? Is it appropriate to guess?**

**A:** Scores are based on the number of correct answers. If the student can eliminate at least one of the choices, he or she should make an educated guess from the choices that remain. A wrong answer and an omitted answer count the same. However, it is better to move ahead to the next item and return to the puzzling one later. No student is expected to answer all questions correctly.

**Q: How is my student compared to other students taking the ISEE?**

**A:** Your student is compared only to other independent school applicants who tested for the same grade during the past three years. Your student is not compared to students applying to a different grade who are taking the same level of the test. The percentile ranking on the score report shows how your student scored in comparison to the other students applying to the same grade. The group of students who take the ISEE—the ISEE norming population—is a very select group of students who are applying to competitive schools. Therefore, ISEE percentile ranks are generally lower—anywhere from 10 to 40 percentile points lower—than those on other tests that use national norms. The schools that use the ISEE are familiar with ISEE scores and the group of students taking the ISEE. You may wish to check with the school(s) to which you are applying to learn the range of ISEE scores expected for applicants to their school(s).

**Q: How soon will I receive my student's scores?**

**A:** After paper testing, schools send the ISEE answer sheets and essays to the ISEE Operations Office for production of an Individual Student Report (ISR). Scoring takes place on Monday, Wednesday, and Friday. The ISR is posted to a family's online account right after scoring and an email is then sent to notify the family that this has taken place. Copies of the ISR are also posted for ERB schools and consultants, only if the family has listed them as recipients. The essay, which is not scored and is released only to ERB schools, accompanies the ISR. Score reports to schools do not list any other school recipients.

For online ISEE testing at a school or Prometric site, score reports will post online 3–5 days after the exam. A notification will be emailed to let you know the report is ready. A hard copy will not be sent to the home address.

**Q: What is the raw score?**

**A:** A raw score represents the number correct. If a student got 23 items correct—say on a test of 40 questions—then the raw score is simply 23.

**Q: What does the scaled score mean?**

**A:** A scaled score is a raw score that has been converted to a different numerical scale, for example, 200–800. The raw score scale ranges from 0—maximum score, while the scaled score range consists of higher numbers with a somewhat arbitrary minimum and maximum score. The range of scaled scores on the ISEE is 760–940.

**Q: To whom is my student being compared on his or her score report?**

**A:** As stated previously, your student is compared only to other independent school applicants who have applied to the same grade during the past three years. There is no comparison specifically to other students who took the test at the same test site or to other applicants who tested on the same day.

**Q: What is a “good” percentile score?**

**A:** The notion of “good” is relative and may only be defined by the specific school. Please check with them for more information on how each plans to use the scores from the ISEE in their admission process.

**Q: What is a stanine?**

**A:** A stanine score is simply another scale and is based on percentile ranks. Percentile ranks range from 1–99, while stanines range from 1–9. In general, a stanine score of 1–3 is below average, 4–6 is average, and 7–9 is above average.

<b>Percentile Rank</b>	<b>Stanine</b>
1–3	1
4–10	2
11–22	3
23–39	4
40–59	5
60–76	6
77–88	7
89–95	8
96–99	9

**Q: Are my student’s scores good?**

**A:** Each school uses the scores on the ISEE as part of the total application process and according to its own criteria. Thus, there is no way to determine a “good” or “bad” score. Each school will use several pieces of information about your student as it evaluates his or her application. These may include the student’s academic record (report card, transcript, etc.), teacher recommendation(s), notes from a personal interview, and extracurricular activities and interests.

**Q: How will I know if my student passed or failed?**

**A:** Students do not pass or fail the ISEE. There is no cutoff point that determines pass/fail status or divides students into these two groups. There is no cutoff (or pass/fail) score recommended by ERB.

**Q What are the schools looking for?**

**A:** Each independent school determines who is admitted based on a variety of criteria. Each school usually has a range of scores that, from experience, indicates if an applicant is likely to be a good fit at the school. Check with the schools to which your student is applying for more information. Remember, there are many pieces of information used in selecting applicants, and your student's score on the ISEE is only one of these.

**Q: How does the ISEE compare with other tests?**

**A:** Each standardized test has its own characteristics. There is no available formal comparison between the ISEE and other national tests such as the Iowa Test of Basic Skills, the Stanford 9, or other similar testing instruments.

**Q: How is the essay scored?**

**A:** The essay, which is not scored and not released to the parent, is released online (with the ISR) to ERB members. Evaluation is based on each individual school's criteria.

**SAMPLE TEST**

**QUESTIONS AND ESSAY**

**ISEE®**

**MIDDLE LEVEL**



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## Verbal Reasoning (Section 1)

The ISEE has a Verbal Reasoning section that is composed of two different kinds of questions: synonyms and sentence completions. Both kinds of questions test your vocabulary and reasoning ability.

**Synonym** questions focus on word recognition, since the correct answer choices are those that have the same meaning or are closest in meaning to the word in the question. Synonyms also test your ability to reason, because you must choose the word that is closest in meaning to the word in the question from among four answer choices.

**Strategy:** Since the answer choices are listed in alphabetical order, think of a word that first comes to mind when you read the synonym and then look for it (or a word like it) in the list.

**Sentence completion** questions measure your ability to understand words and their function. Correct answers are based on clues that appear in the context of the sentence. In the Middle Level ISEE, the sentence completion answer choices are words that logically complete the meaning of the sentence as a whole.

### **Strategies:**

- Read each sentence to get the overall meaning.
- Focus on key words or clue words in the question to help you determine the correct answer.
- Mentally fill in the blank with your own answer and then find the answer choice that is closest in meaning to your own answer.
- Remember that there is almost always a word that obviously points to the correct answer.
- Use word clues such as *although*, *because*, *if*, *since*, or *therefore* to help you figure out the relationships in the sentence.
- After you choose your answer, go back and reread the whole sentence to be sure that it makes sense.



**Synonyms**

Students should be able to

- recognize many of the vocabulary words found on middle and high school graded word lists; and
- select the word from the answer choices that is closest in meaning to the word in question.

***Sample Questions***

Directions: Answer the following sample questions by selecting the word that is most nearly the same in meaning as the word in capital letters. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the questions, turn to the next page and evaluate your answers.

1. ABHOR

- (A) conceal
- (B) detest
- (C) govern
- (D) mystify

2. DRASTIC

- (A) extreme
- (B) logical
- (C) petty
- (D) rustic

3. DELIBERATE

- (A) arbitrary
- (B) extravagant
- (C) intentional
- (D) legitimate

**Sample Answer Sheet: Darken the correct answer for each item.**

1    Ⓐ Ⓑ Ⓒ Ⓓ

2    Ⓐ Ⓑ Ⓒ Ⓓ

3    Ⓐ Ⓑ Ⓒ Ⓓ

*Answers to Sample Questions*

1. Your task is to select the answer choice that is closest in meaning to the word “abhor.” “Abhor” means to think of something with horror or loathing, or to hate or reject something. Therefore, choice **(B)**, **detest**, is the best answer.
2. “Drastic” is an adjective meaning something (such as a practice or change) that is severe or radical. Choice **(A)**, **extreme**, is the best answer to this question.
3. “Deliberate” can be an adjective meaning something done with careful consideration or something done slowly; it can also be a verb meaning to consider something with care. Here you can tell it is an adjective because all the answer choices are adjectives. Choice **(C)**, **intentional**, is the best answer to this question.

**Sentence Completion**

Students should be able to

- use context clues to select the word that correctly completes the sentence.

***Sample Questions***

**Directions:** Answer the following sample questions. Select the word that most correctly completes the sentence. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the questions, turn to the next page and evaluate your answers.

**Note:** To assist you in finding the right answer among the answer choices, one-word answers are listed alphabetically.

1. The company president hoped the board of directors would ----- to her proposal, but they rejected it because of the cost.  
  
(A) assent  
(B) entrust  
(C) pretend  
(D) react
2. With actors rushing to their places and the stage crew hurrying to move the scenery, scene changes in a theater are often -----.  
  
(A) bashful  
(B) defensive  
(C) hectic  
(D) sinister
3. The striking workers were protesting their low pay, unsafe working conditions, and rigid schedules, ----- that they wanted management to take seriously.  
  
(A) commodities  
(B) grievances  
(C) hazards  
(D) occupations

**Sample Answer Sheet: Darken the correct answer for each item.**

- 1    Ⓐ Ⓑ Ⓒ Ⓓ
- 2    Ⓐ Ⓑ Ⓒ Ⓓ
- 3    Ⓐ Ⓑ Ⓒ Ⓓ

*Answers to Sample Questions*

1. The structure of the sentence tells you that the company president hoped for something that did not actually happen. The board actually rejected her proposal, so you can tell that she hoped for them not to reject it. You are looking for a word that means the opposite of “reject.” Choice **(A)**, **assent**, is the best answer to this question because “to assent” means “to agree.”
2. The structure of this sentence tells you that the missing word should be a description that is supported by the information in the first part of the sentence. The first part of the sentence describes people rushing and hurrying during scene changes, so you are looking for a word that describes hurried motion. Choice **(C)**, **hectic**, is the best answer to this question because hectic means “characterized by activity or haste.”
3. The structure of this sentence tells you that low pay, unsafe working conditions, and rigid schedules are all things that fall into a particular category, and that the workers wanted management to take the things in that category seriously. You are looking for a word that describes the missing category. Choice **(C)**, hazards, may be tempting because unsafe working conditions are hazards, but low pay and rigid schedules are not. Choice **(B)**, **grievances**, is the best answer to this question because all three things are grievances, or complaints made about situations people consider unjust.



## Quantitative Reasoning (Section 2)

**Quantitative Reasoning** is one of two math sections on the ISEE. This section is designed to show how your reasoning skills have developed. It tests your ability to use your understanding of mathematics to develop your own opinions about how to solve math problems. It does not test the amount of math you have learned, but how well you think mathematically. Quantitative Reasoning questions require little or no calculations; the emphasis is on your ability to reason mathematically. You may be asked to

- estimate numerical values;
- employ logic to determine what a particular problem is about;
- compare and contrast quantities;
- analyze and interpret data;
- analyze, compare, predict, draw conclusions, and summarize graphs;
- use reason to calculate the probability of events;
- understand concepts and applications of measurements; and
- know how to arrive at statistical solutions to problems that are given.

All questions found in the two math sections of the ISEE are linked to the NCTM (National Council of Teachers of Mathematics) Standards. The ISEE uses the following NCTM strands as a basis for the Quantitative Reasoning section:

- Numbers and Operations
- Algebra
- Geometry
- Measurement
- Data Analysis and Probability
- Problem Solving

In the Quantitative Reasoning section of the Individual Student Report (ISR), these strands are NOT identified. However, to help you best prepare for this section of the ISEE, the answers to the practice test questions are identified by the NCTM standards. For more information on these strands, visit the NCTM Web site at [www.nctm.org](http://www.nctm.org).

This section has two types of questions: word problems and quantitative comparison questions.

### ***Strategies for Word Problems:***

- Read the question and determine exactly what you are being asked to find.
- Determine what information is relevant and what is irrelevant.
- Cross out the irrelevant information in your test booklet.
- Next, ask yourself, “What steps do I need to use to find the answer?” and “Can I do this by estimating and not by actual calculations?”

- Make a best guess at the correct answer, then look to see if that answer is given.  
(Note: On the ISEE, all answer choices are listed in sequential order from greatest to least, or least to greatest.)
- Next, eliminate all answer choices that are not reasonable.
- Since there is no penalty for guessing, choose the answer that seems most reasonable.

Remember, there is only one correct answer for each question. The answer choices often represent common mistakes or misconceptions, but they are not intended to trick you. You may write in the test booklet.

***Strategies for Quantitative Comparison Questions:***

- The quantitative comparison questions are not in the standard question format found in other sections of this test, but rather two quantities are to be compared. The quantities are shown in two columns: Column A and Column B.
- All comparison questions have the same four answer choices. To save you time in reading the questions, the answer choices in this subsection are not given after each question, but are shown at the top of each page. The answer choices for all questions in this subsection are:
  - (A) The quantity in Column A is greater.
  - (B) The quantity in Column B is greater.
  - (C) The two quantities are equal.
  - (D) The relationship cannot be determined from the information given.
- Before doing any mental math or calculations to compare the quantities, first determine if you have enough information to compare the quantities. If not, choose answer D: “The relationship cannot be determined from the information given.”
- If you need to do calculations to compare the quantities, when possible, make estimates of the quantities and write your estimate in its corresponding column.
- Since there is limited reading required in this section, many questions show only the two quantities you are to compare. However, some questions give additional information before or after the quantities you are to compare; therefore, be sure you read all the information given very carefully before answering the question.

**Numbers and Operations**

Students should be able to

- analyze, perform operations on, and compare integers, fractions, decimals, and percents.

**Sample Questions**

**Directions:** Answer the following sample questions. To answer the first question, select the answer that best illustrates numbers and operations. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page.

1. Chris has a basket of apples, 40% of which are red. The rest of the apples are green. If the basket contains 6 red apples, how many green apples does it contain?  
  
(A) 4  
(B) 6  
(C) 9  
(D) 15

**Directions:** To answer the second question, compare the quantity in Column A to the quantity in Column B, and select the correct comparison from the answer choices (A)–(D) shown below the question. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering both questions, turn to the next page and evaluate your answers.

2.

Column A

Column B

$$\sqrt{0.81}$$

$$\sqrt{8.1}$$

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

**Sample Answer Sheet: Darken the correct answer for each item.**

- 1    A  B  C  D
- 2    A  B  C  D

*Answers to Sample Questions*

## Sample Question 1:

The correct answer to this question is answer choice **(C), 9**.

One way to solve this problem is to think that since 40% of the apples are red and the rest of the apples are green, (100% – 40%) or 60% of the remaining apples are green. Six red apples make up 40% of the basket, which means that there are 3 apples for every 20%. So, 9 apples would make up 60% of the basket at 3 apples per 20%.

The problem could also be solved by first recognizing that 6 red apples make up 40% of the total number of apples in the basket. Since the rest of the apples in the basket are green, this leaves 60% green apples in the basket. Then, set up a proportion problem, as shown, and solve for the unknown:

$$\begin{aligned}\frac{.40}{6} &= \frac{.60}{x}; x = \text{the number of green apples;} \\ .40x &= 3.6; \\ x &= 9.\end{aligned}$$

So, 9 apples are green. Thus, the correct answer to this problem is answer choice **(C)**.

## Sample Question 2:

The correct answer to this question is answer choice **(B): The quantity in Column B is greater**.

One way to find the answer is to round the value in column A up to  $\sqrt{1}$  and round the value in Column B down to  $\sqrt{8}$  and realize that  $\sqrt{8} > 1$ .

Another way to solve the problem is to calculate the value in Column A as 0.9 and the value in Column B as 2.85.



**Algebraic Concepts**

Students should be able to

- represent, interpret, and evaluate mathematical situations involving patterns, functions, and relationships.

**Sample Questions**

Directions: Answer the following sample questions. To answer the first question, select the answer that most clearly illustrates the concepts asked for. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page.

- Jack and Michael ride their bikes down a straight path, starting at the same place and time. Jack rides at a speed that is 3 times as fast as Michael's speed ( $M$ ). After 30 minutes, they are 1,000 feet apart. Which equation, when solved for  $M$ , would give Mike's speed, in feet per minute?
  - $3M - M = 1,000$
  - $90M - 1,000 = 30M$
  - $30M = 1,000 - 90M$
  - $30(M + 3M) = 1,000$

Directions: To answer the second question, compare the quantity in Column A to the quantity in Column B, and select the correct comparison from the answer choices (A)–(D) shown below the question. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering both questions, turn to the next page and evaluate your answers.

2.

$$\frac{x}{4} + 5 = 25$$

$$6y + 11 = 77$$

Column A

$x$

Column B

$y$

- The quantity in Column A is greater.
- The quantity in Column B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

**Sample Answer Sheet: Darken the correct answer for each item.**

- A  B  C  D
- A  B  C  D

**Answers to Sample Questions**

## Sample Question 1:

The correct answer to this question is answer choice **(B)**,  $90M - 1,000 = 30M$ .

One way to solve this problem is to recognize that Michael's speed is represented by  $M$ , and Jack's speed is represented by  $3M$ . Since distance is equal to the rate times the time, both Michael's and Jack's distance after 30 minutes would be as shown:

$$\text{Michael's Distance} = M(30) \text{ or } 30M$$

$$\text{Jack's Distance} = 3M(30) \text{ or } 90M$$

which gives the equations shown:

$$90M - 30M = 1,000$$

or

$$90M - 1,000 = 30M.$$

Thus, the correct answer is answer choice **(B)**.

## Sample Question 2:

The correct answer to this question is answer choice **(A)**: **The quantity in A is greater.**

One way the answer can be found is:

$$\text{Solve for } x: \quad \frac{x}{4} + 5 = 25;$$

$$\frac{x}{4} = 20;$$

$$x = 80.$$

$$\text{Solve for } y: \quad 6y + 11 = 77;$$

$$6y = 66;$$

$$y = 11.$$

Thus, choice **(A)** is correct.

**Geometry**

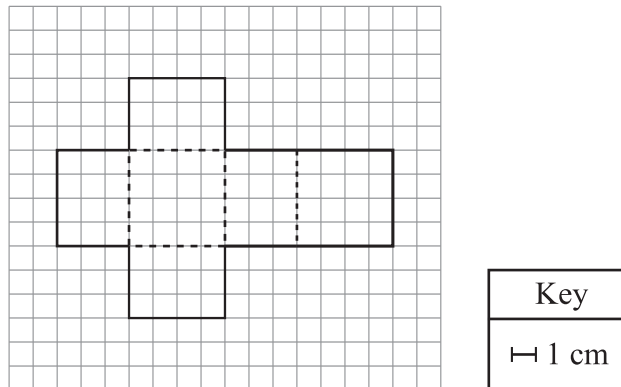
Students should be able to

- understand characteristics and properties of geometric figures; and
- describe geometric shapes and figures.

**Sample Question**

Directions: Answer the following sample question. Select the answer that most clearly illustrates the relationships among the values. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1. The figure shown is called a net—a two-dimensional representation of a three-dimensional object. When cut out and folded along the dotted lines, a net can be used to create a three-dimensional figure.



What is the volume of the three-dimensional object represented by the two-dimensional net?

- (A)  $36 \text{ cm}^3$
- (B)  $48 \text{ cm}^3$
- (C)  $64 \text{ cm}^3$
- (D)  $80 \text{ cm}^3$

**Sample Answer Sheet: Darken the correct answer for this item.**

1   (A) (B) (C) (D)

*Answer to Sample Question*

The correct answer to this question is answer choice **(B)**,  $48 \text{ cm}^3$ .

One way the answer can be found is to recognize that when the figure is folded along the dotted lines, it will create a rectangular prism with edge lengths of 3 cm, 4 cm, and 4 cm. The volume of this prism is  $48 \text{ cm}^3$ .

Thus, the correct answer to this question is answer choice **(B)**.

**Measurement**

Students should be able to

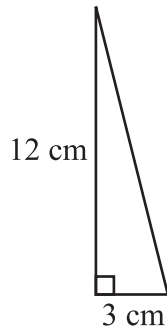
- understand and use formulas for measurable attributes of objects.

**Sample Question**

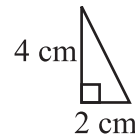
Directions: Answer the following sample question. Compare the quantity in Column A to the quantity in Column B, and select the correct comparison from the answer choices (A)–(D) shown below the question. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1.

Triangle 1



Triangle 2



Column A

The area of a triangle similar to Triangle 1 with a scale factor of  $\frac{2}{3}$

Column B

The area of a triangle similar to Triangle 2 with a scale factor of  $\frac{3}{2}$

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

**Sample Answer Sheet: Darken the correct answer for this item.**

1   (A) (B) (C) (D)

***Answer to Sample Question***

The correct answer to this question is answer choice **(B)**: **The quantity in Column B is greater.**

One way to solve the problem is:

$$\text{Column A area: } \frac{1}{2}bh = \frac{1}{2}\left[3\left(\frac{2}{3}\right)\right]\left[12\left(\frac{2}{3}\right)\right] = \frac{1}{2}(2)(8) = 8 \text{ cm}^2;$$

$$\text{Column B area: } \frac{1}{2}bh = \frac{1}{2}\left[2\left(\frac{3}{2}\right)\right]\left[4\left(\frac{3}{2}\right)\right] = \frac{1}{2}(3)(6) = 9 \text{ cm}^2.$$

Since  $8 < 9$ , the correct answer is answer choice **(B)**.

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**Data Analysis and Probability**

Students should be able to

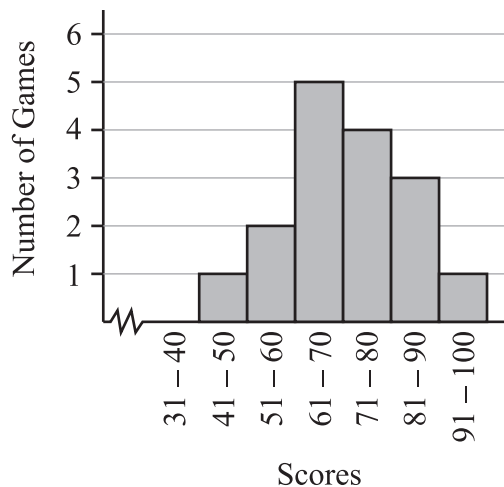
- collect, display, interpret, and make predictions about a set of data; and
- understand and apply the basic concepts of probability.

**Sample Questions**

Directions: Answer the following sample questions. To answer the first question, select the answer that best illustrates data analysis and probability. Darken the circle for your answer choice in the sample answer sheet at the bottom of the next page.

1. A basketball team has played 16 games this season. The range of points that was scored in each game is displayed in this histogram.

BASKETBALL TEAM STATISTICS



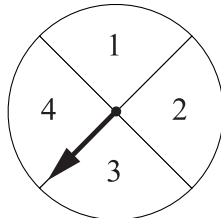
Which measure of central tendency could never be equal to one of the 16 individual scores that were used to create the histogram?

- (A) mean
- (B) median
- (C) mode
- (D) range

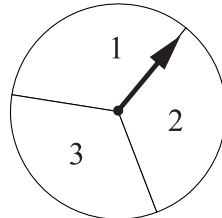


**Directions:** To answer the second question, compare the quantity in Column A to the quantity in Column B, and select the correct comparison from the answer choices (A)–(D) shown below the question. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering both questions, turn to the next page and evaluate your answers.

2. Spinner 1 and Spinner 2 are both spun. The results of the two spins are added.



Spinner 1



Spinner 2

(The sections on Spinner 1 are equal.)

(The sections on Spinner 2 are equal.)

Column A

Column B

For any one time both spinners are spun, the probability that the sum will be 3

For any one time both spinners are spun, the probability that the sum will be 6

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

**Sample Answer Sheet: Darken the correct answer for each item.**

1     A  B  C  D

2     A  B  C  D

**Answers to Sample Questions**

## Sample Question 1:

The correct answer to this question is answer choice **(B)**, **median**.

To find the answer to this problem, consider the fact that the median score is the average of the two middle scores (the 8th and 9th scores) because there are an even number of scores in the data set. The histogram shows that the 8th score is located in the range from 61 to 70, while the 9th score is located in the range from 71 to 80. Therefore, the 8th and 9th scores must be different values because they are not found in the same range of scores. The average of the 8th and 9th scores will lie between these scores. Thus, you will never get a score for the median that is in the data set.

## Sample Question 2:

The correct answer to this question is answer choice **(C)**: **The two quantities are equal**.

Since there are 12 possible sums, the probability of any particular result is  $\frac{2}{12}$  or  $\frac{1}{6}$ .

Column A: The sum of 3 appears twice, so the probability of getting a sum of 3 is  $\frac{2}{12}$  or  $\frac{1}{6}$ .

Column B: The sum of 6 appears twice, so the probability of getting a sum of 6 is  $\frac{2}{12}$  or  $\frac{1}{6}$ .

Since  $\frac{1}{6} = \frac{1}{6}$ , the correct answer is answer choice **(C)**.



## Reading Comprehension (Section 3)

The actual Middle Level **Reading Comprehension** section of the ISEE contains six reading passages; the practice test in this book contains five passages. The passages include topics related to history, science, literature, and contemporary life. Some questions ask you to find a phrase or word in the passage, so all passages show line numbers in the left margin. Each passage is followed by six questions about the passage.

**Strategy:** Read the passage first to get an overall view. As you read the passage, ask yourself, “What is the main idea? What facts and details are given?” As you answer the questions following the passage, use the line numbers to help you find the section or lines you may need to look at again.

A sample passage and questions may be found on the next two pages. The types of questions you may be asked focus on six categories:

- The *Main Idea* items assess the student’s ability to look for an overall message, theme, or central idea in the passage or section of the passage.
- The *Supporting Ideas* items assess the student’s ability to identify explicit ideas that support the main idea or another important concept found in the text.
- *Inference* items ask the student to draw a conclusion from content not explicitly stated in the text. Inference items may ask the student to compare and contrast ideas, interpret or analyze text, and/or predict subsequent events or outcomes.
- *Vocabulary* items deal with word definitions within the context of the passage, usually in the form of “most nearly means.”
- *Organization/Logic* items ask students to identify the sequence, pattern, relationship, structure, or summary of the passage and to identify the major features of different literary genres, including narrative, informational, and instructional.
- *Tone/Style/Figurative Language* items assess the student’s understanding of mood, tone, point of view, and figurative language such as simile, metaphor, images, irony, and personification.

***Sample Passage***

*The sample passage is followed by six questions based on its content.*

1 It is often said that elephants are particularly  
2 afraid of mice. But there is abundant evidence  
3 that this is not the case. According to the  
4 director of the National Zoological Park in  
5 Washington, D.C., the elephants in the zoo pay  
6 no attention whatever to the many mice that turn  
7 up in the elephants' hay. Nor is there any  
8 evidence that elephants in the wild exhibit any  
9 particular fear of mice. Of course it is quite  
10 possible that individual elephants may have  
11 such a fear, but most zoologists who have  
12 experience with wild elephants say that their  
13 two greatest fears are dogs and human beings.

14 Yet the belief that elephants have a particular  
15 fear of mice is very persistent. Many years ago,  
16 a popular writer asserted that elephants are  
17 afraid of mice because small mouse-like animals  
18 found in their wild haunts sometimes crawl up  
19 the trunks of the huge beasts when they are  
20 feeding and dig their claws into the elephants'  
21 trunks. The elephants become frantic and blow  
22 violently but are unable to dislodge the mice.  
23 This story, which has captured the imaginations  
24 of many, is almost certainly pure fiction.

**Sample Questions**

**Directions:** Answer the questions on the basis of what is stated or implied in the passage. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the questions, turn to the next page and evaluate your answers.

- |  |  |
|--|--|
| <p>1. The main purpose of this passage is to</p> <p>(A) show that most elephants are afraid of dogs.</p> <p>(B) argue that a myth about elephants is not true.</p> <p>(C) explain why the elephant’s trunk is so sensitive.</p> <p>(D) imply that elephants are more fearful than people.</p> <p>2. Which statement about elephants’ fears is best supported by the passage?</p> <p>(A) Not all elephants fear the same things.</p> <p>(B) Elephants fear only what they have seen.</p> <p>(C) Elephants never fear anything larger than they are.</p> <p>(D) Elephants fear one thing in the wild, another in captivity.</p> <p>3. According to the passage, most elephants react to mice with</p> <p>(A) affection.</p> <p>(B) disgust.</p> <p>(C) indifference.</p> <p>(D) panic.</p> | <p>4. In line 16, the word “asserted” most nearly means</p> <p>(A) claimed.</p> <p>(B) discovered.</p> <p>(C) feared.</p> <p>(D) proved.</p> <p>5. Which phrase means most nearly the same as “found in their wild haunts” (line 18)?</p> <p>(A) pursued by wild elephants</p> <p>(B) hunting wildly for elephants to torment</p> <p>(C) living in the wild where the elephants live</p> <p>(D) came across the elephants when they were acting wild</p> <p>6. Which best describes the way the passage is organized?</p> <p>(A) A series of contradictory examples is presented.</p> <p>(B) A series of problems is stated with no solutions given.</p> <p>(C) A popular view is challenged by presenting evidence contradicting that view.</p> <p>(D) An opinion is stated in the second sentence and reversed in the last sentence.</p> |
|--|--|

**Sample Answer Sheet: Darken the correct answer for each item.**

- |   |   |   |   |
|---|---|---|---|
| 1 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 4 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
| 2 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 5 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
| 3 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 6 | <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |

**Answers to Sample Questions**

*This passage describes the myth that elephants are afraid of mice and presents evidence to show that this myth is not actually true.*

**Sample Question 1:**

This item asks you to determine the main purpose of the passage. Choice **(B)** is the correct answer because the passage presents an argument against the myth that elephants are afraid of mice. Choice (A) is a supporting idea, choice (C) is information that is not provided in the passage, and choice (D) is an implication that cannot be made from the passage.

**Sample Question 2:**

This item asks you to determine which statement can be supported based on information that is given in the passage. There is no information in the passage about whether elephants fear things they have not seen, whether elephants in the wild fear different things from elephants in captivity, or whether elephants can fear things other than themselves. You can find the correct answer, **(A)**, in lines 10–11, which imply that elephants fear different things by saying that “individual elephants may have such a fear.”

**Sample Question 3:**

Your task here is to determine which best reflects the attitude of elephants toward mice. You can find the answer in lines 5–7, which describe how the elephants at the National Zoo behave toward mice. They “pay no attention” to them, which tells you that their attitude is **(C)**, indifference.

**Sample Question 4:**

Your task here is to identify the meaning of the word “asserted.” “Asserted” most nearly means argued or claimed, so the correct answer is **(A)**. To assert something is not to actually discover or prove it, so **(B)** and **(D)** are incorrect.

**Sample Question 5:**

This item asks you to understand the figurative meaning of the phrase “found in their wild haunts.” “Haunts” here is used to mean a place where elephants are commonly found, not a place that is literally haunted. Therefore the correct answer is **(C)**.

**Sample Question 6:**

This question asks you to determine how the passage is organized. The passage presents evidence against a popular view, so the correct answer is **(C)**. It does not present contradictory evidence or a series of problems, and the author’s opinion in the passage does not change, so **(A)**, **(B)**, and **(D)** are incorrect.



## Mathematics Achievement (Section 4)

**Mathematics Achievement** tests mathematical skills you have learned from the very beginning of your school career. All questions in this section are aligned to the standards articulated by the NCTM. As with the questions in the Quantitative Reasoning section, this section will include questions from these NCTM standards:

- Number and Operations
- Algebra
- Geometry
- Measurement
- Data Analysis and Probability, and
- Problem Solving

For more information on these mathematical standards, visit [www.nctm.org](http://www.nctm.org).

The Mathematics Achievement section will test your ability to identify and solve problems related to the NCTM standards in the six areas listed above. Specifically, the Mathematic Achievement questions have these characteristics:

- Unlike the Quantitative Reasoning section, you may need to do calculations to determine the correct answer for some questions.
- Answer choices may represent misconceptions or procedural errors (such as incorrect order of mathematical operations in a multi-step problem) but there are no trick questions or trick answers.
- Unlike the Quantitative Reasoning section, some items may require knowledge of mathematical terminology as indicated in the grade appropriate NCTM standards.
- Although conversions between units of measurement may be required to correctly answer the problem, *students do not have to memorize conversions in the U.S. standard system (such as twelve inches equals one foot)*. If conversions within the U.S. standard system are required to find the correct answer to the question, they are given in the question.
- Common metric units will be found in some questions in this section, but conversions within the same unit for volume, length, mass, or temperature in the metric system are not provided (i.e., conversions between centimeters and meters).

You may not use a calculator or scratch paper. You may write in this book, since you may write in the test booklet when you take the ISEE.

***Strategies:***

- Read the entire question and study any related graphic images for each question before looking at the answer choices.
- Remember all four answer choices are logical answers—there are no answer choices such as “all of the above” or “none of the above.”
- Next determine your answer and look for it in the answer choices provided.
  - *To save you time, all answers are listed in sequential order from greatest to least, or least to greatest, **unless the answer could be determined by using the ordered answers.*** (For example, a question which asks which number is the largest number would not have its answer choices ordered by value.)
- Remember to check your work, since often the answer choices represent common mathematical mistakes or procedural misconceptions.
- Some questions may be unfamiliar to you because you may not have yet covered that particular math concept at your current school. If you do not know the answer to the question, or if the answer you have determined is not listed as an answer choice, you may choose to make a mark in your test booklet (not your answer document), skip that question for now, and move on to the next question. *Remember all questions on the ISEE have equal value.* If you have time before the end of this test section, you may be able to come back to it later.



**Numbers and Operations: Whole Numbers**

Students should be able to

- represent, perform operations on, and compare integers;
- understand properties of operations; and
- use factors, multiples, prime factorization, and relatively prime numbers.

***Sample Question***

Directions: Answer the following sample question. Select the answer that best illustrates numbers and operations. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1. What is the least common multiple of 8, 10, and 12?  
  
(A) 2  
(B) 4  
(C) 120  
(D) 960

**Sample Answer Sheet: Darken the correct answer for this item.**

1   (A) (B) (C) (D)

***Answer to Sample Question***

The correct answer to this question is answer choice **(C)**, **120**.

One way to solve this problem is to factor each number into its prime factorization, as shown:

$$8 = 2 \times 2 \times 2; 10 = 2 \times 5; 12 = 2 \times 2 \times 3.$$

The factor 2 appears 3 times in 8, so use  $2 \times 2 \times 2$  as factors of the least common multiple.

The factor 5 appears 1 time in 10, so use 5 as a factor of the least common multiple.

The factor 3 appears 1 time in 12, so use 3 as a factor of the least common multiple.

Now multiply these factors:  $2 \times 2 \times 2 \times 5 \times 3$ .

So, the least common multiple is:  $2 \times 2 \times 2 \times 5 \times 3 = 120$ .

Thus, the correct answer to this question is answer choice **(C)**.

**Numbers and Operations: Decimals, Percents, Fractions**

Students should be able to

- represent, perform operations on, and compare decimals, fractions, and percents; and
- develop and use strategies to estimate values to solve problems.

***Sample Question***

Directions: Answer the following sample question. Select the answer that best illustrates numbers and operations. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1. A clothing store had shirts on sale at 20% off the regular price. The store then took an additional 10% off the sale price. What is the final price of a shirt originally priced at \$50?  
  
(A) \$35  
(B) \$36  
(C) \$40  
(D) \$45

**Sample Answer Sheet: Darken the correct answer for this item.**

1    A    B    C    D

***Answer to Sample Question***

The correct answer to this question is answer choice **(B)**, **36**.

One way to solve this problem is to recognize that the regular price of the shirt is \$50.

A 20% discount means that the new selling price is  $(100\% - 20\%)$  or 80% of the original price or  $\$[0.80(50)]$ .

An additional 10% off means that a person would pay  $(100\% - 10\%)$  or 90% of the already reduced price of  $\$[0.80(50)]$ .

$$0.90[(0.80)(50)] = 36.$$

Thus, the final price is \$36, so the correct answer is answer choice **(B)**.

**Algebraic Concepts**

Students should be able to

- represent, analyze, and generalize a variety of patterns, functions, and relationships with tables, graphs, words, and symbolic rules; and
- model real-world situations using graphs, tables, and equations.

**Sample Questions**

**Directions:** Answer the following sample questions. Select the answer that most clearly illustrates the concepts asked for. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the questions, turn to the next page and evaluate your answers.

1. To park a car in the Park Anytime Garage on a Sunday, the cost is \$2.00 for the first hour or fraction thereof, and \$0.60 for each additional whole hour or fraction of an hour thereafter. Which rule represents the total cost,  $T$ , of parking a car at this garage for  $n$  hours if  $n$  is a whole number of hours?  
  
(A)  $T = 0.6n + 2n$   
(B)  $T = 0.6n - 2$   
(C)  $T = 0.6n + 2$   
(D)  $T = 0.6(n - 1) + 2$
2. What is the value of  $x$  in the equation  $\frac{x+3}{x} = \frac{9}{12}$ ?  
  
(A) 12  
(B) 6  
(C) -1  
(D) -12

**Sample Answer Sheet: Darken the correct answer for each item.**

- 1    A  B  C  D  
2    A  B  C  D

**Answers to Sample Questions**

## Sample Question 1:

The correct answer is answer choice **(D)**,  $T = 0.6(n - 1) + 2$ .

One way to solve this problem is to first recognize that the value of  $n$  includes the first hour of parking at a rate of \$2.00 for that first hour.

To find the number of hours parked beyond the first hour, subtract the first hour from the total number of hours parked,  $(n - 1)$ .

To find the cost of parking beyond the first hour, multiply the number of additional hours by \$0.60:  $0.60(n - 1)$  or  $0.6(n - 1)$ .

Finally, add the cost of parking for the first hour (\$2.00) to the cost of parking each additional hour:  $0.6(n - 1) + 2$ .

Thus,  $T = 0.6(n - 1) + 2$ , so the correct answer is answer choice **(D)**.

## Sample Question 2:

The correct answer to this question is answer choice **(D)**,  $-12$ .

One way to solve this problem is to multiply each fraction by the least common denominator ( $12x$ ) and then solve for  $x$ .

$$\begin{aligned}\frac{x+3}{x} &= \frac{9}{12} \\ 12(x+3) &= 9x \\ 12x + 36 &= 9x \\ 3x &= -36 \\ x &= -12\end{aligned}$$

So, the correct answer is answer choice **(D)**.

**Geometry**

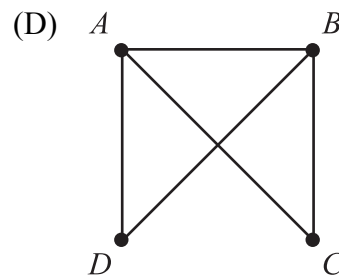
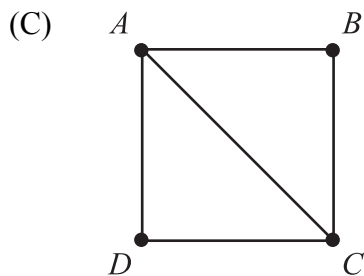
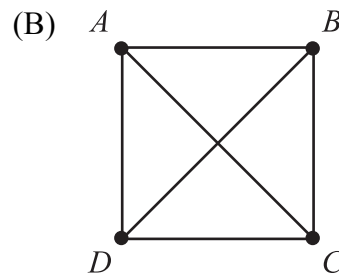
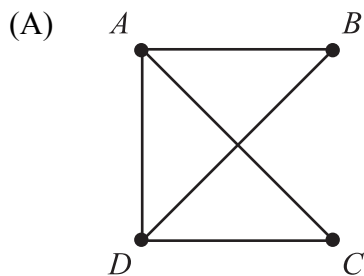
Students should be able to

- understand characteristics and properties of geometric figures; and
- use coordinate geometry to represent geometric concepts, including transformations of geometric figures.

**Sample Question**

Directions: Answer the following sample question. Select the answer that best illustrates geometric operations. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1. Which network best represents routes from point *A* to *B*, *A* to *C*, *A* to *D*, *B* to *D*, and *C* to *D* and does NOT include any other routes?



**Sample Answer Sheet: Darken the correct answer for this item.**

- 1    A    B    C    D

***Answer to Sample Question***

The correct answer to this question is answer choice **(A)**.

One way to solve this problem is to check each route given on the graph. Answer choice **(A)** is the only answer choice that has the given routes and no others.



**Measurement**

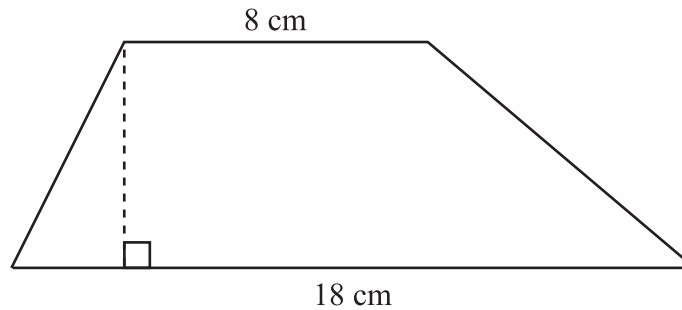
Students should be able to

- use formulas for the area, surface area, and volume of a geometric figure;
- use both customary and metric measurement units; and
- apply appropriate tools, units, and scales to determine measurements.

**Sample Question**

**Directions:** Answer the following sample question. Select the answer that best illustrates measurement abilities. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the question, turn to the next page and evaluate your answer.

1. A trapezoid is shown.



Note: Area of a trapezoid =  $\frac{1}{2}(b_1 + b_2)h$ .

What is the height,  $h$ , of the trapezoid shown, if the area is  $78 \text{ cm}^2$ ?

- (A) 3.5 cm
- (B) 6.0 cm
- (C) 9.1 cm
- (D) 15.6 cm

**Sample Answer Sheet: Darken the correct answer for this item.**

1    A    B    C    D

***Answer to Sample Question***

The correct answer to this question is answer choice **(B)**, **6.0 cm**.

One way to solve this problem is to solve for  $h$  in the equation:

$$78 = \frac{1}{2}(18 + 8)h;$$

$$78 = \frac{1}{2}(26)h;$$

$$78 = 13h;$$

$$h = 6 \text{ cm.}$$

So, the height is 6.0 cm, and the correct answer is answer choice **(B)**.

## Data Analysis and Probability

Students should be able to

- collect, display, and interpret a set of data;
- calculate mean, mode, median, range, and first and third quartiles of a set of data; and
- calculate probabilities.

### Sample Questions

**Directions:** Answer the following sample questions. Select the answer that best illustrates data analysis and probability. Darken the circle for your answer choice in the sample answer sheet at the bottom of the page. After you finish answering the questions, turn to the next page and evaluate your answers.

1. A student surveyed her friends and family to determine how many airplane flights they had taken in the past year. The stem-and-leaf plot shows the results of the survey.

0	2	2	2	3	4	4	4	4	5	5
1	0	0	0	0	1	1	2			
2	0	1	9							
3	2									
4	8									

2 | 9 represents 29 flights

How many people did the student survey?

- (A) 5  
 (B) 10  
 (C) 22  
 (D) 27
2. There are 4 red, 3 blue, and 6 green marbles in a bag. If one marble is to be randomly selected from the bag, what is the probability that the marble will be green?
- (A)  $\frac{6}{7}$   
 (B)  $\frac{6}{13}$   
 (C)  $\frac{3}{13}$   
 (D)  $\frac{1}{6}$

**Sample Answer Sheet: Darken the correct answer for each item.**

1    Ⓐ Ⓑ Ⓒ Ⓓ

2    Ⓐ Ⓑ Ⓒ Ⓓ

***Answers to Sample Questions*****Sample Question 1:**

The correct answer to this question is answer choice **(C)**, **22**.

One way to solve this problem is to count the number of leaves—the total number of digits to the right of the vertical line.

There are 22 leaves, so the correct answer is answer choice **(C)**.

**Sample Question 2:**

The correct answer to this question is answer choice **(B)**,  $\frac{6}{13}$ .

One way to solve this problem is to realize that you are selecting one marble out of 13 total marbles ( $4 + 3 + 6$ ); however, there are 6 green marbles, so you have not one but 6 chances out of 13 to select a green marble.

So, the correct answer to this question is answer choice **(B)**.

*Note: On the ISEE, answer choices are ordered by quantity (unless their order would indicate the correct answer). In this question, they are ordered from greatest to least.*



## Writing the Essay (Section 5)

On the last section of the ISEE test, you will be asked to write a short essay in response to an assigned writing prompt. A writing prompt is randomly selected for use on each test date. The writing prompts include topics of interest to students at your level and are created to give you an opportunity to tell more about yourself.

This part of the test also gives you a chance to show the schools to which you have applied how well you organize your thoughts and express them in a written format. For the actual ISEE test, you are given a sheet of paper on which to make notes. You must write the essay in ink on two pre-lined pages (erasable ink is allowed), and you also must rewrite the prompt at the top of the first page. The actual instructions you will receive when you take the essay portion of the ISEE are shown on pages 118–119 in the “Practice Test” section.

You are given 30 minutes to complete the essay. During those 30 minutes you should

- organize your thoughts;
- prepare your notes or make a short outline; and
- write your final copy.

Writing must be done either in cursive or print using a ballpoint pen. The writing should be done directly on the lines preprinted in the answer document, using blue or black ink.

On the following pages, you will find some tips for writing an essay, some sample essay prompts, and lined pages for writing a sample essay. Three sample essay topics and three sets of lined pages have been provided to give you an opportunity to practice on more than one prompt. Remember to add descriptions and details in your response. If possible, you should ask a parent or teacher to read your essay(s) and give you feedback on what you have written.

**Tips for Writing the Essay**

Here is a brief writing checklist designed to help you organize and write a response to the essay topic provided. This checklist is for your use now, but note that there is NO checklist for you to use when you take the actual ISEE, and you may NOT take a checklist into the test with you. We believe, however, that if you use this checklist as you write your sample essay, you will remember to ask yourself these questions when you write your essay on the actual ISEE.

- Did I put the topic in the box at the top of the first page, as instructed?
- Did I plan my essay before putting it on the lined sheets?
- Did I allow enough time to write my final copy on the lined sheets?
- Did I write about the topic that was given?
- Did I include details to add interest?
- Did I follow rules for grammar, spelling, punctuation, and capitalization?
- Can others read my handwriting?
- Did I review my writing upon finishing?

**Sample Essay Topics**

Directions: Select a topic from the list of sample topics below and write an essay on the pre-lined pages on pages 63 and 64. You may plan your essay on a separate sheet of paper. Remember to rewrite the topic at the top of page 63.

If you would like additional practice writing an essay, pages 65–68 contain pre-lined pages for writing essays on the remaining topics.

Topic 1: If you could improve your school in one way, what would that be? Describe the improvement you would make and explain how it would benefit students.

Topic 2: What would be the perfect career for you some day?

Topic 3: There are many problems in our world today. Name one you would like to solve and explain how you would do it.

**This page is intentionally left blank.**



*Sample Essay #1*

**STUDENT NAME** \_\_\_\_\_ **GRADE APPLYING FOR** \_\_\_\_\_

Use blue or black ink to write the final draft of your essay on this sheet.

You must write your essay topic in this space.

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Use specific details and examples in your response.

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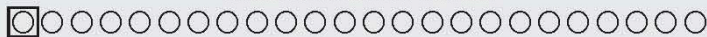
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Blank lined area for writing an essay.

PLEASE DO NOT WRITE IN THIS AREA



**Sample Essay #2**

**STUDENT NAME** \_\_\_\_\_ **GRADE APPLYING FOR** \_\_\_\_\_

Use blue or black ink to write the final draft of your essay on this sheet.

You must write your essay topic in this space.

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Use specific details and examples in your response.

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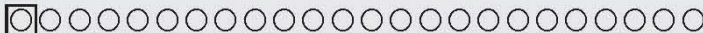
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Area with horizontal lines for writing an essay.

PLEASE DO NOT WRITE IN THIS AREA



*Sample Essay #3*

**STUDENT NAME** \_\_\_\_\_ **GRADE APPLYING FOR** \_\_\_\_\_

Use blue or black ink to write the final draft of your essay on this sheet.

You must write your essay topic in this space.

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Use specific details and examples in your response.

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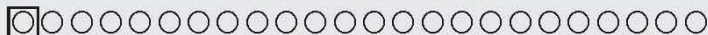
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Lined writing area for an essay response.

PLEASE DO NOT WRITE IN THIS AREA



# PRACTICE TEST

# ISEE<sup>®</sup>

## MIDDLE LEVEL



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## Using the Practice Test

The Practice Test is the same format as the actual ISEE. In each section, the number of questions and the number of minutes that you have to answer the questions are listed under the name of the section. On the actual ISEE, however, there are additional questions which will not be included on your score report, but which may be used on future tests. Thus, the timings for the Practice Test are slightly shorter than on the actual ISEE, since you are answering only questions that will be used to determine your sample score. The chart below shows the number of questions on each section of the Practice Test and the actual ISEE, and how many minutes you should allow for each section of both tests.

**PRACTICE TEST AND ACTUAL TEST—MIDDLE LEVEL**

<b>Sections</b>	<b>Practice Test</b>	<b>Actual ISEE</b>
Verbal Reasoning	35 Questions—17.5 Minutes	40 Questions—20 Minutes
Quantitative Reasoning	32 Questions—30 Minutes	37 Questions—35 Minutes
Reading Comprehension	30 Questions—30 Minutes	36 Questions—35 Minutes
Mathematics Achievement	42 Questions—36 Minutes	47 Questions—40 Minutes
Essay	2-Page Limit—30 Minutes	2-Page Limit—30 Minutes

Although the timings are not the same on the Practice Test and the actual ISEE, since each section on the actual test is carefully timed, it is important to follow the timing instructions on the Practice Test so you can learn how to pace yourself for the actual test.

Remember that the time it takes to read the brief directions at the beginning of each section is NOT included in the testing time. When you take the actual test, you will be allowed a five- to ten-minute break before the Reading Comprehension section and another five- to ten-minute break following the Mathematics Achievement section. On the actual ISEE, you will take each section in the same order in which it appears in this Practice Test. Each section must be taken without stopping; therefore, we strongly encourage you to take the Practice Test exactly the same way so that the experience will be realistic and meaningful. Also, the score you calculate when you check your answers will be more accurate.

Because we think it will help you to know exactly how the test administrator will instruct you on the day of the test, we have included the general directions that will be read to you before the test starts. (These directions are on the next page.) Reading these directions carefully will help you know what to expect.

When you are ready to begin, try to create the following realistic test conditions.

- Find a quiet, well-lighted space with an appropriate writing surface.
- Ask an older person (parent, sibling, friend) to act as test administrator to
  - read the general directions;
  - monitor your time;
  - write down the starting time for each section;
  - tell you when 5 minutes remain in each section; and
  - tell you when to stop.

You will use a copy of the actual answer sheet to mark your answers for the Practice Test. The answer sheet is in Appendix B. You will also use the pre-lined pages in Appendix B for your essay. Use the appropriate parts of the answer sheet and leave the remaining parts blank. For example, leave “Test Administrator” and “ID Number” blank. It may be more convenient for you to photocopy the answer sheet so that you don’t have to turn back and forth between the Practice Test and Appendix B.



## Test Directions

After you are seated in the test room and the test administrator announces that you are ready to begin, he or she will give you your test booklet and an answer sheet. (Please refer to the answer sheet on pages 147–150). Some of the information on this answer sheet may already be filled in for you, but if not, the test administrator will help you. After you complete the test booklet itself, the administrator will give you your essay topic to write on the last two pages of the answer sheet. There will be two five- to ten-minute breaks during the test.

The general directions the test administrator will read to you before you begin the separate sections of the actual ISEE are below. The administrator will not begin timing you until after he or she has finished reading them and answering any appropriate questions. These are the same directions you should use on the Practice Test. It is important to look at them now because they contain important information.

### Directions

The ISEE measures skills and abilities commonly used by students in school. Your test booklet contains four sections: Verbal Reasoning; Quantitative Reasoning; Reading Comprehension; and Mathematics Achievement. There are several different versions for each test, so the questions in your test booklet will probably be different from the questions that others in this room are answering. Because these tests are given to students in more than one grade, don't be surprised if you notice that some of the questions are very easy for you, or that others are very difficult.

Read the directions and samples printed at the beginning of each test carefully. Work as quickly as you can without becoming careless. Do not spend too much time on any question that is difficult for you to answer since all questions are scored equally. Instead, skip it and answer all of the questions that you can. Then, if you have time, return to any questions you may have skipped.

Please select the best choice for each question. On this test, there is no penalty for an incorrect answer.

Be sure to record all your answers on the answer sheet. Mark only one answer for each question, and make every mark heavy and dark, as in these examples.

#### Sample Answers



If you decide to change one of your answers, be sure to erase the first mark completely. Don't worry if you find that there are more answer spaces on the answer sheet than there are questions in this booklet. As you work, make sure that the number of the question that you are answering matches the number on the answer sheet section that you are marking.

**Please do not open the booklet until you are told to do so.**

# ISEE<sup>®</sup>

## Verbal Reasoning

### MIDDLE LEVEL

### Practice Test



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## Section 1

### Verbal Reasoning

35 Questions

Time: 17.5 minutes

This section is divided into two parts that contain two different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, fill in the corresponding circle on your answer document.

#### Part One — Synonyms

Each question in Part One consists of a word in capital letters followed by four answer choices. Select the one word that is most nearly the same in meaning as the word in capital letters.

SAMPLE QUESTION:

SILENCE:

- (A) cheer
- (B) heat
- (C) quiet
- (D) speed

Sample Answer (A)  (B)  (C)  (D)

#### Part Two — Sentence Completion

Each question in Part Two is made up of a sentence with one blank. Each blank indicates that a word is missing. The sentence is followed by four answer choices. Select the word that will best complete the meaning of the sentence as a whole.

SAMPLE QUESTION:

The box was so ----- that it took  
two people to carry it.

- (A) heavy
- (B) old
- (C) pretty
- (D) small

Sample Answer (A)  (B)  (C)  (D)

## Part One—Synonyms

**Directions:** Select the word that is most nearly the same in meaning as the word in capital letters.

---

1. RELUCTANCE:

- (A) boredom
- (B) dejection
- (C) inexperience
- (D) unwillingness

2. SOLITARY:

- (A) alone
- (B) anxious
- (C) honest
- (D) playful

3. KEEN:

- (A) disbelieving
- (B) elegant
- (C) realistic
- (D) sharp

4. ABRUPTNESS:

- (A) ease
- (B) extent
- (C) suddenness
- (D) weariness

5. FEEBLY:

- (A) clearly
- (B) illegally
- (C) nicely
- (D) weakly

6. UNRULY:

- (A) disorderly
- (B) disputed
- (C) distasteful
- (D) doubtful

7. INSIGHT:

- (A) disagreement
- (B) eagerness
- (C) fatigue
- (D) understanding

8. PACIFY:

- (A) admire
- (B) forgive
- (C) praise
- (D) soothe

9. AGILE:

- (A) homely
- (B) nimble
- (C) patient
- (D) willful

10. CONFORM:

- (A) adapt
- (B) celebrate
- (C) excite
- (D) thrive

11. EPISODE:

- (A) announcement
- (B) conclusion
- (C) departure
- (D) incident

12. PRESUME:

- (A) analyze
- (B) construct
- (C) indicate
- (D) suppose

13. INTRICATE:

- (A) complex
- (B) extreme
- (C) formal
- (D) similar

14. LOFTY:

- (A) concise
- (B) elevated
- (C) greedy
- (D) postponed

15. ENDEAVOR:

- (A) omit
- (B) see
- (C) take
- (D) try

16. PLUME:

- (A) branch
- (B) feather
- (C) peak
- (D) ravine

17. TORRID:

- (A) blunt
- (B) dense
- (C) hot
- (D) weak

18. INSOLENTLY:

- (A) barely
- (B) haughtily
- (C) poorly
- (D) responsively

## Part Two—Sentence Completion

**Directions:** Select the word that best completes the sentence.

---

19. Poaching and the loss of rain forest habitat are ----- the gorilla, the chimpanzee, and the orangutan, which are among the world's best-loved primates.
- (A) anticipating  
(B) endangering  
(C) exemplifying  
(D) replenishing
20. Artist Joseph Cornell spent a lot of time scavenging in New York junk shops for the jumble of items from which he ----- his creations.
- (A) assembled  
(B) dissected  
(C) repealed  
(D) revered
21. Skeptical farmers predicted that George Washington Carver's experiments with soil improvement would fail, but Carver himself remained -----.
- (A) amazed  
(B) indifferent  
(C) optimistic  
(D) suspicious
22. Although many climbers have tried to scale Mount Everest, few have succeeded in reaching the ----- of the mountain.
- (A) core  
(B) perimeter  
(C) pinnacle  
(D) support
23. Indiscriminate cutting of pine, cedar, and oak trees for shipbuilding and charcoal-making in the 1860s left the coastal plain region of southern New Jersey almost completely -----.
- (A) barren  
(B) drenched  
(C) fertile  
(D) mountainous
24. Although there were other contributing factors, the ----- cause of industrial growth was the flood of new inventions in eighteenth-century England.
- (A) detrimental  
(B) primary  
(C) sentimental  
(D) temporary

25. Arthur Mitchell's ----- to establish a ballet school and company that would serve the African American population was fulfilled in 1969 when he formed the Dance Theater of Harlem.
- (A) aspiration  
(B) inability  
(C) permission  
(D) refusal
26. Scientists know that the elf owl population has adapted very well to the Sonoran Desert because the species is -----.
- (A) captive  
(B) faltering  
(C) fragile  
(D) thriving
27. The archaeologists wanted to give up after months of fruitless digging and searching for fossils, but the urging of their leader led them to -----.
- (A) economize  
(B) migrate  
(C) persevere  
(D) retire
28. As the excitement of the holiday festivities began to -----, the children became calmer and more focused on their schoolwork.
- (A) flourish  
(B) peak  
(C) resume  
(D) subside
29. When engineers discovered that one component of the seat belt mechanism was ----- to malfunction, they altered the design.
- (A) intended  
(B) prone  
(C) required  
(D) unlikely
30. Although ----- the presence of current economic problems, the tribal spokesperson expressed optimism about the future of the Navajo Nation.
- (A) acknowledging  
(B) celebrating  
(C) extending  
(D) ignoring
31. Kareem's friends are wrong to believe that he is -----, because he is usually quite willing to compromise.
- (A) cautious  
(B) gullible  
(C) obstinate  
(D) protective
32. Lee was forced to ----- her income by working extra hours at the hospital.
- (A) certify  
(B) overhaul  
(C) reject  
(D) supplement

33. The acting company was ----- by hundreds of requests for auditions for the new production of the play *A Raisin in the Sun*.
- (A) disappointed
  - (B) inundated
  - (C) restricted
  - (D) thwarted
34. Although Andrea's comments on the election were -----, her friends were still sure they knew how she would vote.
- (A) characteristic
  - (B) controversial
  - (C) negative
  - (D) noncommittal
35. The essay was a ----- collection of confusing details seemingly thrown together at random.
- (A) haphazard
  - (B) ruthless
  - (C) steadfast
  - (D) vigorous





# ISEE<sup>®</sup>

## Quantitative Reasoning

**MIDDLE LEVEL**

**Practice Test**



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## Section 2

### Quantitative Reasoning

32 Questions

Time: 30 minutes

This section is divided into two parts that contain two different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, remember to fill in the corresponding circle on your answer document.

Any figures that accompany the questions in this section may be assumed to be drawn as accurately as possible EXCEPT when it is stated that a particular figure is not drawn to scale. Letters such as  $x$ ,  $y$ , and  $n$  stand for real numbers.

#### Part One — Word Problems

Each question in Part One consists of a word problem followed by four answer choices. You may write in your test booklet; however, you may be able to solve many of these problems in your head. Next, look at the four answer choices given and select the best answer.

EXAMPLE 1:

What is the value of the expression  $2 \times (2 + 6) \div (3 + 1)$ ?

- (A) 0
- (B) 2
- (C) 4
- (D) 16

Sample Answer

Ⓐ Ⓑ ● Ⓓ

The correct answer is 4, so circle C is darkened.

### Part Two — Quantitative Comparisons

All questions in Part Two are quantitative comparisons between the quantities shown in Column A and Column B. Using the information given in each question, compare the quantity in Column A to the quantity in Column B, and choose one of these four answer choices:

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

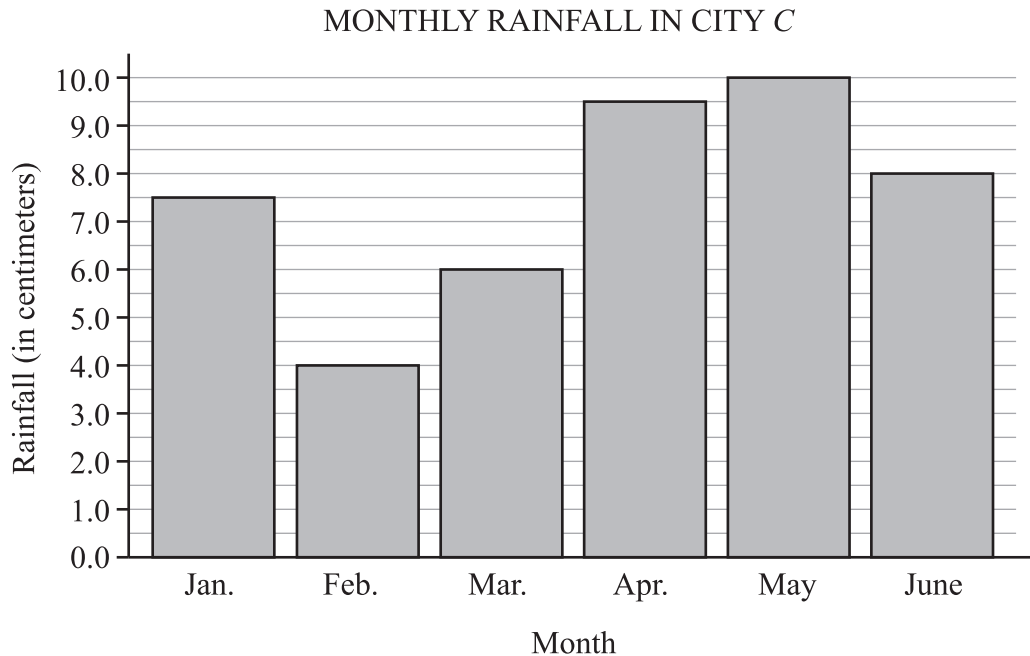
EXAMPLE 2:	<u>Column A</u>	<u>Column B</u>	<u>Sample Answer</u>
	50% of 60	30% of 100	Ⓐ Ⓑ ● Ⓓ
The quantity in <u>Column A</u> (30) is the same as the quantity in <u>Column B</u> (30), so circle C is darkened.			
<hr/>			
EXAMPLE 3:	The expression $4 + x$ rounds to 5 when rounded to the nearest whole number.		
	<u>Column A</u>	<u>Column B</u>	<u>Sample Answer</u>
	$x$	$\frac{2}{3}$	Ⓐ Ⓑ Ⓒ ●
Since $\frac{1}{2} \leq x < \frac{3}{2}$ , there is not enough information given to determine the relationship, so circle D is darkened.			



## Part One—Word Problems

**Directions:** Choose the best answer from the four choices given.

1. The graph shows the total rainfall for six months last year in City C.



According to the graph, what is the mean monthly rainfall?

- (A) 7.5 cm  
 (B) 8.0 cm  
 (C) 9.5 cm  
 (D) 10.0 cm
- 
2. A set of 7 numbers has a mean of 9. What additional number must be included in this set to create a new set with a mean that is 3 less than the mean of the original set?
- (A) -15  
 (B) -18  
 (C) -23  
 (D) -39
3. Bill has 10 coins, all of which are dimes and quarters. If his dimes were quarters and his quarters were dimes, his coins would total 30 cents more. How many quarters does Bill have?  
 (Note: 1 dime = \$.10; 1 quarter = \$.25)
- (A) 2  
 (B) 3  
 (C) 4  
 (D) 6

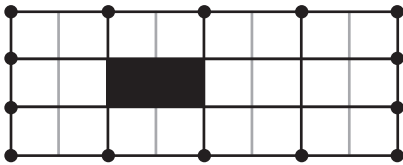
4. There are 7 same-sized cups filled with water which will be used for watering plants. Fred used  $\frac{1}{3}$  of each cup of water.

Janice used  $\frac{1}{4}$  of each cup of water.

Approximately how many cups of water remain?

- (A) 3 cups
- (B) 3.5 cups
- (C) 4 cups
- (D) 4.5 cups

5. The area of the entire rectangle shown is  $96 \text{ cm}^2$ .



What is the area of the shaded region?

- (A)  $2 \text{ cm}^2$
- (B)  $4 \text{ cm}^2$
- (C)  $8 \text{ cm}^2$
- (D)  $12 \text{ cm}^2$

6. Which number is closest to the square root of 150?

- (A) 10
- (B) 12
- (C) 20
- (D) 75

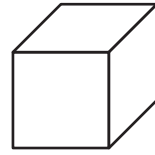
7. The figures show two cubes whose volumes ( $V$ ) are proportional.

Figure 1



$$V = 8 \text{ in.}^3$$

Figure 2



$$V = 64 \text{ in.}^3$$

What is the ratio of the side length of Figure 1 to the side length of Figure 2?

- (A) 1 to 64
- (B) 1 to 16
- (C) 1 to 4
- (D) 1 to 2

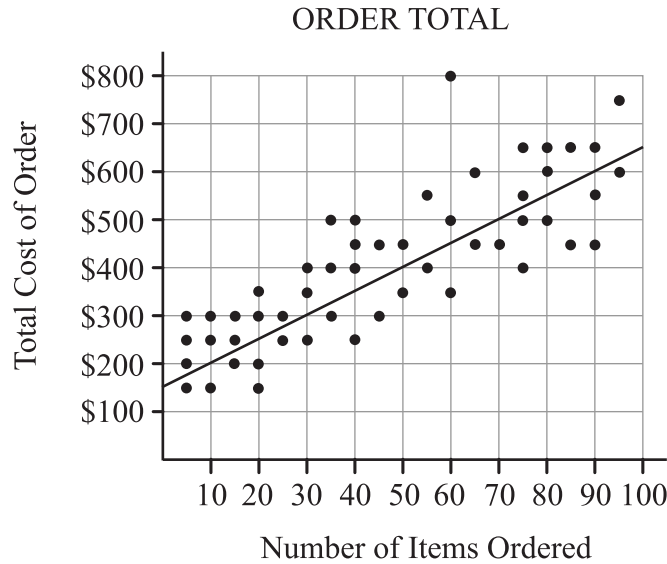
8. Joey has a new system of currency using coins, stamps, and chips. The values are shown below.

$$\begin{aligned} 1 \text{ coin} &= 2 \text{ stamps} \\ 3 \text{ chips} &= 2 \text{ coins} \end{aligned}$$

Joey is paying his friend 12 chips. How many stamps is this payment worth?

- (A) 4
- (B) 6
- (C) 12
- (D) 16

9. The graph shows the relationship between the number of items ordered and the total cost of the order.



Using the line of best fit, what is the average cost of a single item when 60 items are ordered?

- (A) \$6.67
- (B) \$7.50
- (C) \$8.33
- (D) \$450.00

10. If  $4y - 1 = 7$ , then what must  $8y - 2$  equal?

- (A) 2
- (B) 8
- (C) 14
- (D) 16

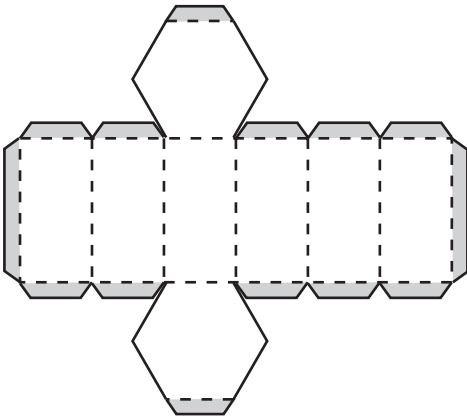
11. A population of 42 fruit flies has increased by 150%. What is the total number of fruit flies after the increase?

- (A) 57
- (B) 63
- (C) 105
- (D) 192

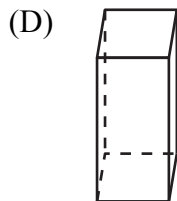
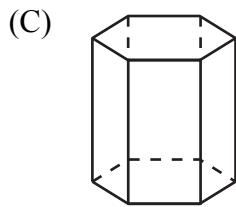
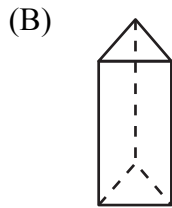
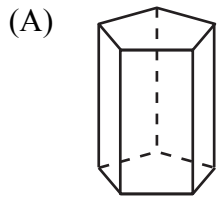
12. Linda is performing an experiment using a random number generator. For each trial, the computer selects a whole number from 1 to 10. What is the probability that the whole numbers selected on the first two trials are both greater than 4?

- (A)  $\frac{1}{10}$
- (B)  $\frac{9}{25}$
- (C)  $\frac{3}{5}$
- (D)  $\frac{7}{10}$

13. The pattern shown can be folded into a polyhedron.



Which polyhedron would result from correctly folding the pattern?



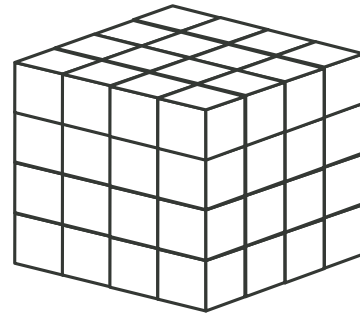
14. A teacher awards test points according to the pattern shown in the table.

Number of Correct Answers	Points
1	2
2	4
3	8

A student scored 128 points. How many correct answers did he provide?

- (A) 7
- (B) 16
- (C) 32
- (D) 64

15. The large cube shown was built using smaller cubes.



How many small cubes were used to build the large cube?

- (A) 32
- (B) 48
- (C) 64
- (D) 96

16. The swim team buys sweatshirts for \$12.00 each, with an additional 5% sales tax added per shirt. A standard shipping fee is added to each order of sweatshirts. The table gives the total cost, including the shipping fee, for four separate orders.

SWEATSHIRT ORDERS

Number of Sweatshirts	Total Cost of Each Order
1	\$16.60
4	\$54.40
2	\$29.20
3	\$41.80

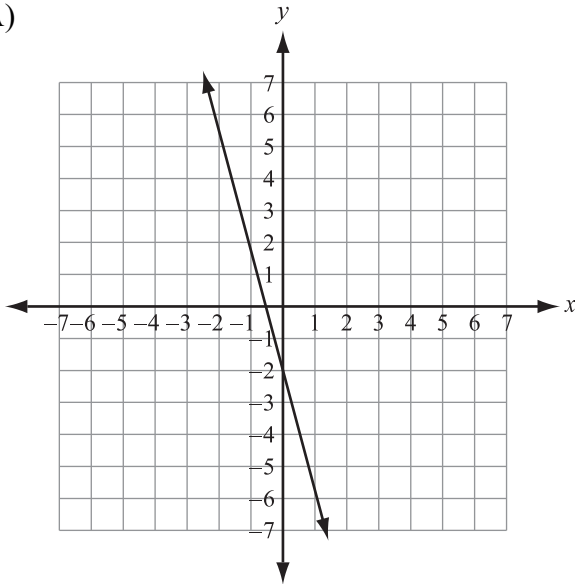
What is the shipping charge per order?

- (A) \$4.00  
 (B) \$4.60  
 (C) \$12.00  
 (D) \$12.60
17. On Monday, a student tells a secret to 3 people. On Tuesday, each of the 3 friends tells the secret to 3 different people, who in turn each tell the secret to 3 different people. The secret is repeated in the same pattern until Sunday. Which expression represents the number of people who will know the secret by the end of the day on Sunday?
- (A)  $1 + 3^6$   
 (B)  $1 + 3^7$   
 (C)  $3 + 3^2 + 3^3 + 3^4 + 3^5 + 3^6 + 3^7$   
 (D)  $1 + 3 + 3^2 + 3^3 + 3^4 + 3^5 + 3^6 + 3^7$

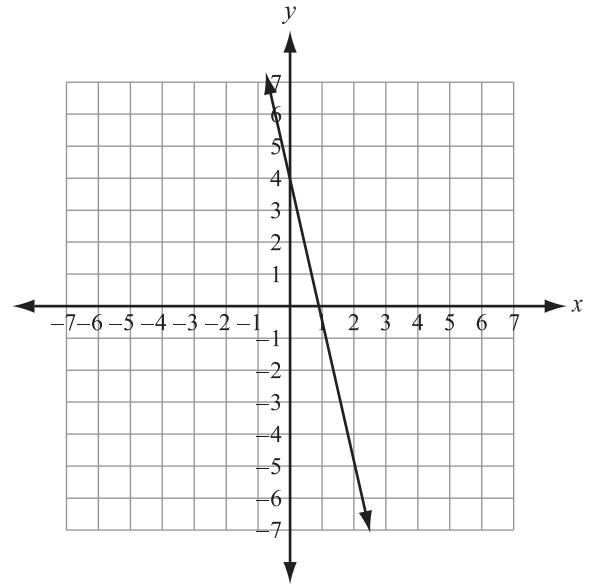


18. For which function does the  $y$  value increase at the greatest rate as the  $x$  value increases?

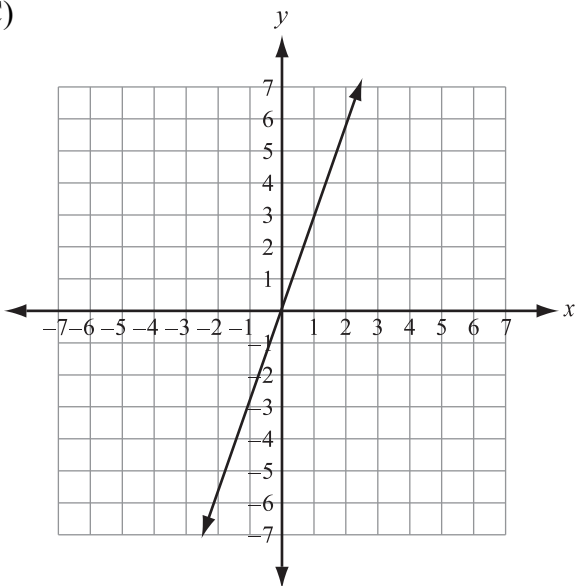
(A)



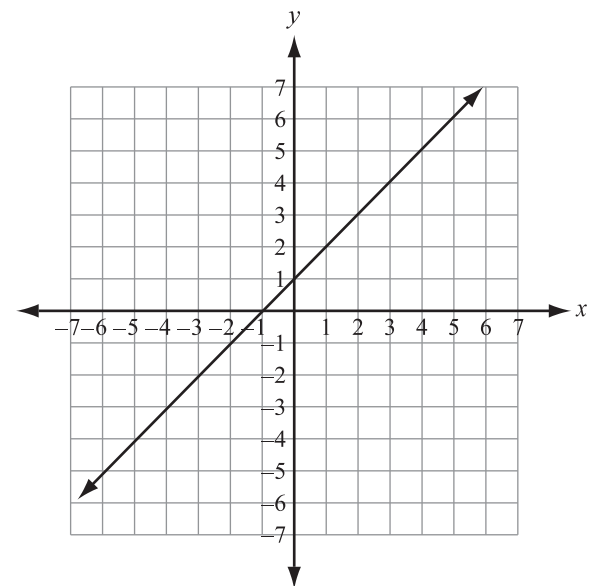
(B)



(C)



(D)



## Part Two—Quantitative Comparisons

**Directions:** Using the information given in each question, compare the quantity in Column A to the quantity in Column B. All questions in Part Two have these answer choices:

- (A) The quantity in Column A is greater.  
 (B) The quantity in Column B is greater.  
 (C) The two quantities are equal.  
 (D) The relationship cannot be determined from the information given.

$$y = 4x - 1$$

	<u>Column A</u>	<u>Column B</u>
19.	The value of $x$ when $y = 15$	The value of $y$ when $x = 4$

Rosa received \$1.48 in quarters, dimes, and pennies only.  
 (Note: 1 quarter = \$.25; 1 dime = \$.10; 1 penny = \$.01)

	<u>Column A</u>	<u>Column B</u>
20.	The smallest number of coins that Rosa could have received	9

	<u>Column A</u>	<u>Column B</u>
21.	$\sqrt{9+16}$	$\sqrt{9} + \sqrt{16}$

	<u>Column A</u>	<u>Column B</u>
22.	$-3^4$	$(-3)^4$

The original price of a bicycle was \$100.00.

	<u>Column A</u>	<u>Column B</u>
23.	The amount saved after a 20% discount	The amount saved after two separate discounts of 10% and 10%

To get from Springfield to Wakefield, Mr. Swift can take Back Road for 20 miles at an average speed of 40 miles per hour, or he can take High Road for 25 miles at an average speed of 50 miles per hour.

	<u>Column A</u>	<u>Column B</u>
24.	Average time the trip takes by Back Road	Average time the trip takes by High Road

	<u>Column A</u>	<u>Column B</u>
25.	The slope of $4x - 2y = 10$	The slope between $(4, 4)$ and $(2, 8)$

**Answer choices for all questions on this page:**

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

To predict how two groups of people would vote on a proposal, samples of each group were surveyed to see if they would vote YES or NO on the proposal. The percent of each sample surveyed and the number of YES and NO responses are shown in the table.

Group	A	B
Percent of Group Surveyed	25%	50%
Number of YES votes	18	20
Number of NO votes	7	30

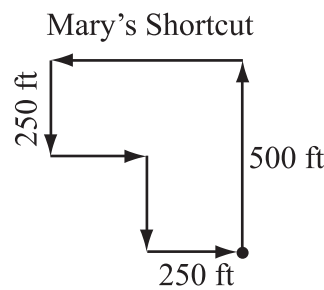
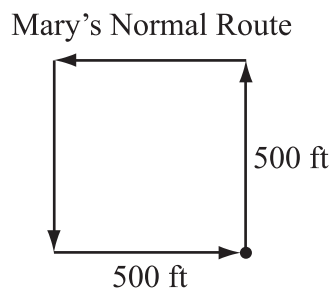
The results above can be used to predict how many people will vote for and against the proposal when all members of both groups vote.

Column A

Column B

26. The predicted number of YES votes when all members in Group A vote

The predicted number of YES votes when all members in Group B vote



In the diagrams above, all angles that appear to be right angles are right angles.

Column A

Column B

27. The distance Mary saved by taking the shortcut instead of her normal route

200 ft

**Answer choices for all questions on this page:**

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

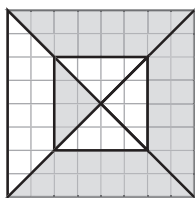
Kerry is driving from Town *A* to Town *E*. She must travel through Towns *B*, *C*, and *D*, in that order, to reach Town *E*. Kerry has just arrived at Town *C*.

DISTANCE BETWEEN TOWNS	
Town <i>A</i> to Town <i>B</i>	135 miles
Town <i>B</i> to Town <i>C</i>	55 miles
Town <i>C</i> to Town <i>D</i>	110 miles
Town <i>D</i> to Town <i>E</i>	86 miles

Column A

Column B

28. The total number of miles Kerry has driven
- The total number of miles Kerry has left to drive

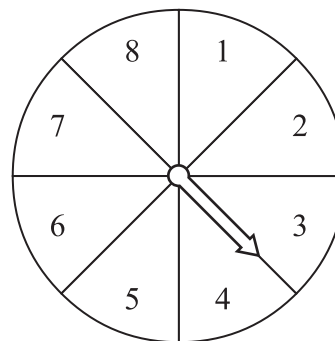


Column A

Column B

29. Area of shaded portion of the figure
- Area of unshaded portion of the figure

The spinner is divided into 8 equal-sized parts.



Column A

Column B

30. For any one time the spinner is spun, the probability of spinning an odd number
- For any one time the spinner is spun, the probability of spinning a number less than 5

Nine cards numbered 1–9 are put into a bag.

Column A

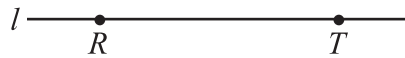
Column B

31. Probability of choosing an even number
- Probability of choosing an odd number

**Answer choices for all questions on this page:**

- (A) The quantity in Column A is greater.
- (B) The quantity in Column B is greater.
- (C) The two quantities are equal.
- (D) The relationship cannot be determined from the information given.

$R$  and  $T$  are points on line  $l$ .  $S$  (not shown) is a point on line  $l$  between  $R$  and  $T$ .



Column A

Column B

32. The distance between  $R$  and  $S$

The distance between  $S$  and  $T$



# ISEE<sup>®</sup>

## Reading Comprehension

### MIDDLE LEVEL

### Practice Test



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## Section 3

### Reading Comprehension

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30 Questions

Time: 30 minutes

This section contains five short reading passages. Each passage is followed by six questions based on its content. Answer the questions following each passage on the basis of what is stated or implied in that passage. You may write in your test booklet.



Questions 1–6

1 To most people, camouflage means that  
2 form of protective coloration that enables an  
3 animal to blend unseen into its surroundings  
4 and “hide” without actually being out of sight.  
5 But by definition the word “camouflage” also  
6 means to disguise for the purpose of deception.  
7 That is why many animals that have no  
8 protective coloration are still said by naturalists  
9 to be camouflaged. For although there are  
10 animals that make no attempt to hide from us,  
11 these are animals so artfully disguised and so  
12 skilled in deceit and deception that we rarely  
13 see them for what they truly are.

14 There are creatures on land and in the sea  
15 that are disguised as twigs or leaves or sponges  
16 or any number of objects of no appeal to a  
17 meal-seeking predator. A “dewdrop” on a leaf  
18 that a passing bird ignores, for example, may  
19 be a tasty, edible beetle. Or a swaying “reed” in  
20 the bulrushes may on close inspection prove to  
21 be a long-necked bird imitating the breeze-  
22 blown reeds surrounding it.

23 Some animals manage to survive with  
24 partial disguises. Instead of being completely  
25 camouflaged, they have conspicuous markings  
26 or growths on strategic portions of their bodies.  
27 A caterpillar, for instance, may have two huge

28 false eyes on its belly, so placed that when it  
29 rears up to display them, it suddenly takes on  
30 the aspect of a terrifying snake. Or a butterfly  
31 may have a false head opposite its true head to  
32 decoy birds into striking at its least vulnerable  
33 part.

34 There is also a group of animals called  
35 mimics. They have no weapons of their own  
36 with which to ward off attacks. Instead, they  
37 find safety in similarity. That is, they  
38 impersonate dangerous animals, or distasteful  
39 ones that their enemies have found inedible.  
40 There are perfectly harmless snakes, for  
41 example, that live carefree lives because they  
42 are disguised to look like poisonous coral  
43 snakes. There is a common fly that mimics a  
44 bumblebee so exactly, both in appearance and  
45 in behavior, that humans and birds alike  
46 instinctively shy away from it for fear of being  
47 stung. But it has no stinger and is completely  
48 harmless.

49 While these forms of camouflage are highly  
50 effective, they do not always offer complete  
51 immunity from attack. Yet without camouflage,  
52 these creatures would have become as extinct  
53 as the giant dinosaurs.



1. Which sentence best expresses the main idea of the passage?
  - (A) Not all forms of camouflage are equally effective.
  - (B) Mimicry and disguise are the best forms of camouflage.
  - (C) Camouflage is usually ineffective as a means of disguise.
  - (D) Camouflage is a means of defense against more powerful enemies.
  
2. The passage implies birds ignore beetles that look like dewdrops because
  - (A) the beetles are too small for the birds to see.
  - (B) the beetles look similar to poisonous insects.
  - (C) the birds do not realize the beetles are edible.
  - (D) the birds think that the beetles are predators.
  
3. The author describes mimics as those animals that
  - (A) are dangerous but do not attack unless provoked.
  - (B) imitate the behavior of animals that may attack them.
  - (C) are harmless but have the appearance of dangerous animals.
  - (D) seek safety by having the appearance of animals that are friendly.
  
4. In line 32, “vulnerable” most nearly means
  - (A) unable to fight.
  - (B) exposed to harm.
  - (C) unaware of danger.
  - (D) favorable for survival.
  
5. Which sentence best expresses the main point of the last paragraph (lines 49–53)?
  - (A) Methods of camouflage improve as animals evolve.
  - (B) Some methods of camouflage are more effective than others.
  - (C) An animal’s survival depends on effective camouflage techniques.
  - (D) Camouflage techniques allow the animal to blend in with its surroundings.
  
6. Which sentence best describes the organization of the passage?
  - (A) An argument is put forward and then refuted.
  - (B) A theory is proposed, considered, and modified.
  - (C) A term is defined and its meaning explained through examples.
  - (D) A process is presented and clarified by presenting the steps involved.

Questions 7–12

1 The history of Florida is, by some,  
2 measured in freezes. Severe ones, for example,  
3 occurred in 1747, 1766, and 1774. The freeze  
4 of February 1835 was probably the worst in the  
5 state's history. But because more citrus growers  
6 were affected, the Great Freeze of 1895 seems  
7 to enjoy the same sort of status that the  
8 Blizzard of '88 once held in the North.  
9 Temperatures in the major orange-producing  
10 locales of Florida on February 8, 1895, went  
11 into the teens for much of the night. The next  
12 morning, it was apparent that the Florida citrus  
13 industry had been virtually wiped out. The  
14 groves around Keystone City, in Polk County,  
15 however, went through the freeze of 1895  
16 without damage. Slightly more elevated than  
17 the countryside around it and studded with  
18 sizable lakes, Keystone City became famous.  
19 People came to marvel at this Garden of Eden  
20 in the middle of a newly created wasteland, and  
21 the citizens of the town changed its name to  
22 Frostproof.

23 The twentieth century has had numerous  
24 severe freezes as well, but no great one until  
25 1962, when, on the night of December 11,  
26 northwesterly winds traveling at almost a  
27 thousand miles a day brought a deadly mass of  
28 gelid air to Florida. The freeze lasted for four  
29 nights and, at its coldest, split the bark of trees,  
30 causing a sound like repeated rifle shots. The  
31 worst night was December 13, when the  
32 temperature generally stayed below twenty  
33 degrees for as long as four and a half hours, and  
34 even Frostproof recorded a low temperature of  
35 twenty-four degrees during the night. Nearly  
36 eight billion oranges were lost. So many trees  
37 were either damaged or killed that the ultimate  
38 effect was to cut the state's average annual  
39 production of oranges in half. Immediate losses  
40 of ripe fruit on the trees would have been even  
41 greater after the 1962 freeze if there had not  
42 been a slow thaw, which allowed citrus  
43 workers to harvest millions of frozen oranges  
44 and rush them to juice-concentrate plants for  
45 processing.

7. According to the passage, the Great Freeze of 1895 is famous among Florida citrus growers because it
- (A) was the most severe freeze recorded to that point.
  - (B) cut Florida’s average annual production of oranges and orange juice in half.
  - (C) affected a greater number of growers than any previous freeze in the history of Florida.
  - (D) forced growers to plant cold-resistant varieties of oranges similar to those grown in Frostproof.
8. The passage implies that Keystone City escaped damage in the freeze of 1895 because of the city’s
- (A) geographical features.
  - (B) preparedness for disaster.
  - (C) modern juice-concentrate plants.
  - (D) extensive experience with citrus growing.
9. According to the passage, which factor contributed to the citrus growers’ ability to salvage at least part of their crop affected by the freeze of 1962?
- (A) the slow thaw that followed the freeze
  - (B) the widespread use of artificial lakes around the groves
  - (C) the use of smoky fires to help heat the air around the groves
  - (D) the early harvesting once the forecast of freezing weather was received
10. In line 28, the word “gelid” most nearly means
- (A) humid.
  - (B) icy.
  - (C) liquid.
  - (D) windy.
11. The primary purpose of the second paragraph (lines 23–45) is to describe
- (A) the nature of the first truly disastrous Florida citrus freeze of the twentieth century.
  - (B) the differences between the Florida freeze of 1962 and other great citrus freezes in the previous century.
  - (C) the way in which natural phenomena, such as freezes, can affect the prices consumers pay for agricultural products.
  - (D) how modern processing of orange juice into frozen concentrate has lessened the impact that weather patterns have on the productivity of Florida citrus growers.
12. Which best describes the organization of the passage?
- (A) from facts to opinions
  - (B) in chronological order
  - (C) from general to specific
  - (D) by different types of weather

## Questions 13–18

1 When two friends meet and talk informally,  
 2 they usually adopt similar body postures. If  
 3 they are particularly friendly and share  
 4 identical attitudes toward the subjects being  
 5 discussed, the positions in which they hold  
 6 their bodies will probably become even more  
 7 alike, to the point where they virtually become  
 8 carbon copies of each other. The friends are  
 9 automatically indulging in what has been called  
 10 “postural echo,” and they do this unconsciously  
 11 as part of a natural body display of  
 12 companionship.

13 There is a good reason for this. A true bond  
 14 of friendship is usually possible only between  
 15 people of roughly equal status. This equality is  
 16 demonstrated in many indirect ways, but it is  
 17 reinforced in face-to-face encounters by a  
 18 matching of the postures of relaxation or  
 19 alertness. In this way, the body transmits a  
 20 silent message, saying: “See, I am just like  
 21 you.”

22 The precision of the postural echo can be  
 23 quite remarkable. Two friends talking in a  
 24 restaurant both lean on the table with the same  
 25 elbow, tilt their bodies forward to the same  
 26 angle, and nod in agreement with the same  
 27 rhythm. Two other friends reclining in  
 28 armchairs both have their legs crossed in  
 29 exactly the same way and both have one arm  
 30 across their lap.

31 “Come and sit down. You look so  
 32 uncomfortable standing there” is a common

33 invitation that helps to increase the chances for  
 34 postural echo, and groups of friends usually try  
 35 to arrange themselves in such a way that they  
 36 can synchronize with one another’s body  
 37 postures and movement rhythms. The sensation  
 38 gained in such cases is one of being “at ease.”  
 39 It is simple enough for one person to destroy  
 40 such ease, merely by adopting an alien  
 41 posture—stiff and formal, or jerky and anxious.

42 Sometimes it is possible to observe two  
 43 distinct sets of postural echoes in the same  
 44 group. Usually this is related to “taking sides”  
 45 in a group argument. If three of the group are  
 46 disputing with the other four, for example, the  
 47 members of each subgroup will tend to match  
 48 up their body postures and movements but keep  
 49 distinct from the other subgroup. On occasion,  
 50 it is even possible to predict that one of them is  
 51 changing sides before he or she has declared  
 52 this change of heart verbally, because his or her  
 53 body posture will start to blend with the  
 54 postures of the opposing “team.” Mediators,  
 55 trying to control such groups, may take up an  
 56 intermediate body posture as if to say “I am  
 57 neutral,” folding their arms like one side and  
 58 crossing their legs like the other side.

59 Postural echo is one of the unspoken ways  
 60 humans tell each other how they feel about  
 61 each other. This unconscious synchrony of  
 62 body movements is an important part of our  
 63 everyday social life.

13. With which statement about people in conversation would the author be most likely to agree?
- (A) People are usually aware when they are using similar postures.
  - (B) If people do not display postural echo, it probably means they have not learned how to do it.
  - (C) The degree to which people move in unison is related to the closeness of their friendship.
  - (D) Postural echo is more likely to be displayed by adults than by children.
14. In line 17, “reinforced” most nearly means
- (A) criticized.
  - (B) restored.
  - (C) strengthened.
  - (D) tested.
15. According to the passage, matching postures helps to show that two people
- (A) are disagreeing.
  - (B) have equal status.
  - (C) are learning from each other.
  - (D) have practiced their movements.
16. Which best states the main point of the fourth paragraph (lines 31–41)?
- (A) Postural echo occurs only among people who are good friends.
  - (B) People feel uneasy until all group members use the same postures.
  - (C) A group of friends will tend to sit down when talking to each other.
  - (D) Postural echo occurs only when all members are willing to have it occur.
17. In lines 40–41, “adopting an alien posture” can best be interpreted as using a posture that is
- (A) boastful.
  - (B) physically uncomfortable.
  - (C) insulting to the others in the group.
  - (D) different from that of the others in the group.
18. Which best describes the organization of the passage?
- (A) An opinion is presented, followed by an opposite opinion.
  - (B) Concepts are defined and supporting examples are given.
  - (C) Several separate facts are followed by a general conclusion.
  - (D) Facts and opinions are presented alternately.

Questions 19–24

1 An influential photographer during the  
2 1930s and 1940s, Dorothea Lange used her  
3 camera to document the suffering of people  
4 during the Great Depression, a time of severe  
5 economic crisis in the United States. The view  
6 through the lens of her camera alerted  
7 Americans to the plight of the migrant workers  
8 of this period and ultimately persuaded the  
9 United States government to help those most  
10 affected.

11 Dorothea’s mother, Joan, was a role model  
12 of independence. A hardworking, capable  
13 woman, she raised Dorothea alone, working at  
14 two jobs. Joan helped her daughter overcome  
15 physical limitations that were the result of a  
16 childhood bout with polio and that left  
17 Dorothea with a permanently disabled leg.

18 When Dorothea Lange had completed high  
19 school and was studying to be a teacher, she  
20 made the sudden decision to become a  
21 photographer. Despite the fact that she had  
22 never taken a photograph and did not own a  
23 camera, she went to New York City to look for  
24 work at the best portrait studios. She quickly  
25 found a job with Arnold Genthe, a famous  
26 portrait photographer, from whom she learned  
27 about taking pictures, developing film, and  
28 running a studio. She was soon ready to begin  
29 her own work. She eventually moved to  
30 San Francisco, where she made the

31 acquaintance of many artists and photographers.

32 When the stock market crashed in 1929,  
33 Lange’s life was transformed. Although her  
34 business survived, her family was stressed by  
35 financial worries. Because of the social and  
36 economic troubles caused by the Depression,  
37 her work dramatically changed. Later, she  
38 described one particular event that occurred as  
39 she was looking out her studio window one  
40 morning: “I watched an unemployed young  
41 worker coming up the street. He came to the  
42 corner, stopped and stood there a little  
43 while . . . What was he to do? Which way was  
44 he to go?” The man’s situation and indecision  
45 captured Lange’s attention. She took her large  
46 camera out into the street and began  
47 photographing the people she saw.

48 The images she captured during the  
49 troubled decade of the 1930s have become  
50 some of the most insightful pictures of the  
51 United States during that period. The  
52 photographs are often haunting. One of Lange’s  
53 most famous photographs from this period,  
54 *Migrant Mother*, captures the despair and  
55 hardships of the migrants. Soon after this  
56 picture was published in the *San Francisco*  
57 *News*, aid was sent to the migrant camp.  
58 Because of her efforts, the government  
59 approved funding for food and camps to help  
60 victims of the Depression.

19. Which sentence best expresses the main point of the passage?
- (A) Dorothea Lange always wanted to be a photographer.
  - (B) Dorothea Lange suffered greatly during the Depression.
  - (C) Dorothea Lange used her skills in photography to help others.
  - (D) Dorothea Lange helped Genthe photograph images of the Depression.
20. The passage implies that Lange's mother influenced Lange primarily by
- (A) forcing her to support herself.
  - (B) supporting her move to San Francisco.
  - (C) encouraging her to become a photographer.
  - (D) demonstrating self-reliance and responsibility.
21. According to the passage, Lange left her studio to
- (A) photograph people facing difficulties.
  - (B) work with other famous photographers.
  - (C) photograph people from around the world.
  - (D) become a teacher as she had originally planned.
22. The passage supports which statement about Lange?
- (A) She was a quiet and very reserved person.
  - (B) She made several life-changing decisions.
  - (C) She always regretted not becoming a teacher.
  - (D) She was easily swayed by the opinion of others.
23. Which word best describes the author's tone when describing Lange?
- (A) admiring
  - (B) critical
  - (C) humorous
  - (D) worried
24. The passage provides information to support which statement?
- (A) The Depression caused many problems for migrant workers.
  - (B) The Depression affected Californians more than people from other parts of the country.
  - (C) The stock market crash caused Lange's family to lose all of their money and property.
  - (D) Lange asked the United States government to provide financial aid to photographers.

Questions 25–30

1 Before the time of Sir Isaac Newton  
2 (1642–1727), it was taken for granted that one  
3 set of rules applied to things happening on  
4 Earth, and that an entirely different set of rules  
5 regulated events in the heavens.

6 Newton destroyed this assumption by  
7 finding a connection between the apple falling  
8 from a tree and the planets revolving around  
9 the Sun. He began by wondering whether the  
10 gravitational attraction observed on the surface  
11 of Earth reached out as far as the Moon.  
12 Eventually, Newton was able to show by  
13 mathematical proof that the Moon’s travel  
14 around Earth must indeed be ruled by the force  
15 of gravity. Furthermore, the same law also  
16 explained the captive movement of all the  
17 planets in elliptical orbits around the Sun.

18 It was just one more step to say that every  
19 two bodies in the entire universe attracted each  
20 other, no matter how far apart they were—  
21 although, the farther apart they were, the  
22 weaker was the force of attraction. In this way,  
23 the motions of all the planets, stars, and  
24 galaxies could be explained in terms of a  
25 universal force of gravity.

26 Another step in logic, together with many  
27 years of observing thousands of stars in the sky,  
28 leads to the all-encompassing conclusion: All  
29 the laws of nature are the same in all regions of  
30 the universe.

31 This is a grand conception. We can now see  
32 the universe as one unified whole, and it is

33 immensely helpful to science to be able to feel  
34 confident that gravity, electricity, light,  
35 chemical reactions, atomic reactions—every  
36 sort of physical behavior—follow exactly the  
37 same rules everywhere in the universe as they  
38 do here on Earth.

39 But it turns out that there are exceptions to  
40 our elegantly simple assumption. Gravitation is  
41 not precisely the same everywhere. The  
42 astronomers have discovered that in the  
43 neighborhood of a very heavy star, the strength  
44 of the gravitational force differs slightly from  
45 Newton’s law of gravity. So we find that, while  
46 his law holds true in our region of space, it has  
47 to be modified to cover the situation in a very  
48 different region.

49 At the other extreme, physicists also  
50 encountered surprises when they investigated  
51 the microcosmic world of the atom and  
52 elementary particles. The more the atom was  
53 studied, the more obvious it became that the  
54 particles in this realm did not obey the rules  
55 that applied to large bodies, such as rocks and  
56 planets.

57 Is any physical law always true? We do not  
58 know for sure, but it is possible that all laws  
59 will have exceptions for extreme  
60 circumstances. Luckily, the primary laws, such  
61 as those for gravity, are dependable and  
62 unchanging in most of the situations in which  
63 humans find themselves.



25. One of the main purposes of the passage is to explain
- (A) the advancements in theories of astronomy.
  - (B) Newton's law of gravity and its exceptions.
  - (C) why the planets follow elliptical paths around the Sun.
  - (D) why Newton thought natural laws differed in different places.
26. The "assumption" referred to in line 6 is that
- (A) there are different laws regulating events on Earth and in space.
  - (B) the gravitational attraction observed on Earth applies to the Moon as well.
  - (C) there is a connection between an apple falling from a tree and the planets revolving around the Sun.
  - (D) the laws that describe the motion of the planets do not apply to atoms and elementary particles.
27. According to the passage, what did Newton use to demonstrate that his theory of gravity explained the orbit of our Moon?
- (A) mathematical equations
  - (B) the example of an apple falling from a tree
  - (C) measurements of Earth's gravity at several different places
  - (D) a comparison of our Moon with the moons circling other planets
28. In lines 42–43, "in the neighborhood of" most nearly means
- (A) close to.
  - (B) similar to.
  - (C) familiar with.
  - (D) working with.
29. In line 49, the phrase "the other extreme" refers to
- (A) the distant regions of the universe.
  - (B) the rules that were assumed to regulate events in the heavens.
  - (C) the rules that apply to large bodies, such as rocks and planets.
  - (D) the microcosmic world of the atom and elementary particles.
30. Which best describes the organization of the passage?
- (A) A hypothesis is presented and supporting examples provided.
  - (B) An argument is advanced and then defended against all criticism.
  - (C) A general principle is stated, supporting and refuting examples are discussed, and the assumption is modified.
  - (D) Three competing theories are proposed, relevant evidence is discussed, and one of the theories is accepted as correct.



# ISEE<sup>®</sup>

## Mathematics Achievement

### MIDDLE LEVEL

### Practice Test



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## Section 4

### Mathematics Achievement

42 Questions

Time: 36 minutes

Each question is followed by four suggested answers. Read each question and then decide which one of the four suggested answers is best.

Find the row of spaces on your answer document that has the same number as the question. In this row, mark the space having the same letter as the answer you have chosen. You may write in your test booklet.

SAMPLE QUESTION:

Sample Answer

What is the area of a 6 cm by 6 cm rectangle?

 A  B  C  D

- (A) 28 cm<sup>2</sup>
- (B) 36 cm<sup>2</sup>
- (C) 48 cm<sup>2</sup>
- (D) 64 cm<sup>2</sup>

The correct answer is 36 cm<sup>2</sup>, so circle B is darkened.



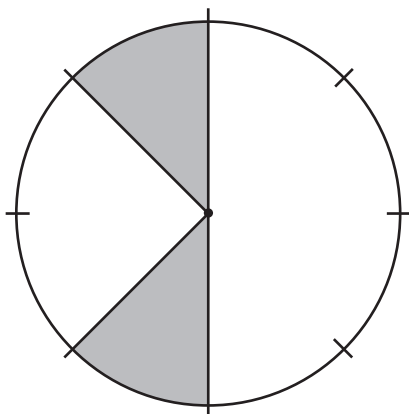
1. What is the sum of  $9,876 + 6,789$ ?

- (A) 15,555
- (B) 16,555
- (C) 16,565
- (D) 16,665

2. Which expression is equal to 20?

- (A)  $(3 \times 5) + 4 - 7$
- (B)  $3 \times (5 + 4) - 7$
- (C)  $3 \times 5 + (4 - 7)$
- (D)  $3 \times (5 + 4 - 7)$

3. The circle shown is divided into equal parts.



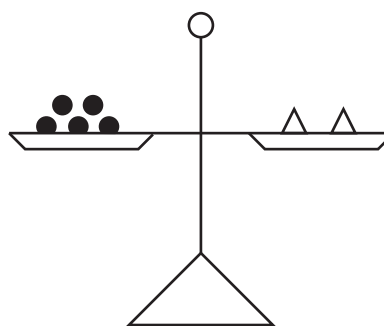
What part of the circle is shaded?

- (A)  $\frac{1}{5}$
- (B)  $\frac{1}{4}$
- (C)  $\frac{1}{3}$
- (D)  $\frac{1}{2}$

4. Which number has no positive factors except itself and 1?

- (A) 8
- (B) 15
- (C) 27
- (D) 31

5. Use the diagram of the balance scale to answer the question.



In the figure shown, if  $5 \bullet = 2 \triangle$  and one  $\triangle$  is 15, what is the value of  $\bullet$ ?

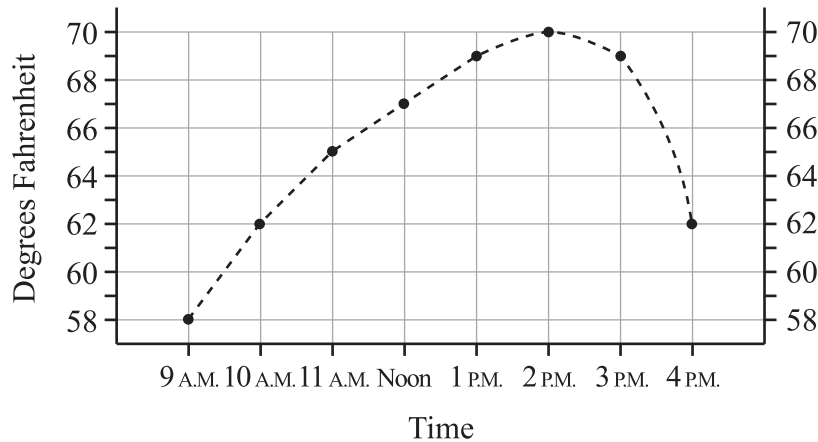
- (A) 3
- (B) 5
- (C) 6
- (D) 30

6. Elida scored an average of 10 points in each of the 5 rounds of a game. If her highest score was 18 and the range of her scores was 12, what was her lowest score?

- (A) 2
- (B) 5
- (C) 6
- (D) 7

7. The students in Mr. Byrd’s class checked the hourly temperatures in their schoolyard and displayed the results on the graph shown.

TEMPERATURE AT EACH HOUR IN OUR SCHOOLYARD



What was the difference between the highest and lowest temperatures recorded?

- (A) 8°
- (B) 12°
- (C) 22°
- (D) 24°

8. If  $P = 2 \times (L + W)$ , what is  $P$  when  $L$  is 18 inches and  $W$  is 10 inches?

- (A) 28 inches
- (B) 36 inches
- (C) 46 inches
- (D) 56 inches

9. Mr. Garcia asked his students to estimate the answer for the expression  $(89 \times 91) \div 800$ . Which is the closest estimate?

- (A) 9
- (B) 10
- (C) 90
- (D) 100

10. Anne and Darryl made the table shown to keep track of their savings for 4 weeks.

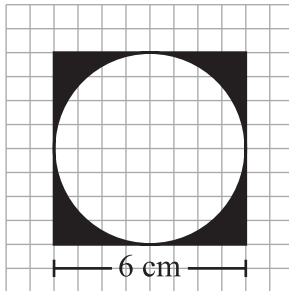
ANNE’S AND DARRYL’S SAVINGS

Week	Anne’s Total	Darryl’s Total
1	\$2.40	\$4.80
2	\$4.20	\$5.70
3	\$6.00	\$6.60
4	\$7.80	\$7.50

After week 1, how much did Darryl save each week?

- (A) \$0.90
- (B) \$1.10
- (C) \$1.50
- (D) \$1.90

11. Which is equivalent to the expression  $\frac{60(48+52)}{3}$ ?
- (A) 1,012  
(B) 2,000  
(C) 2,932  
(D) 6,000
12. Today, Josh's homework assignment increased by one and a half times the amount of homework he was assigned yesterday. By what percent did his homework increase?
- (A) 1.5%  
(B) 50%  
(C) 150%  
(D) 250%
13. In this figure, a circle is inscribed within a square.

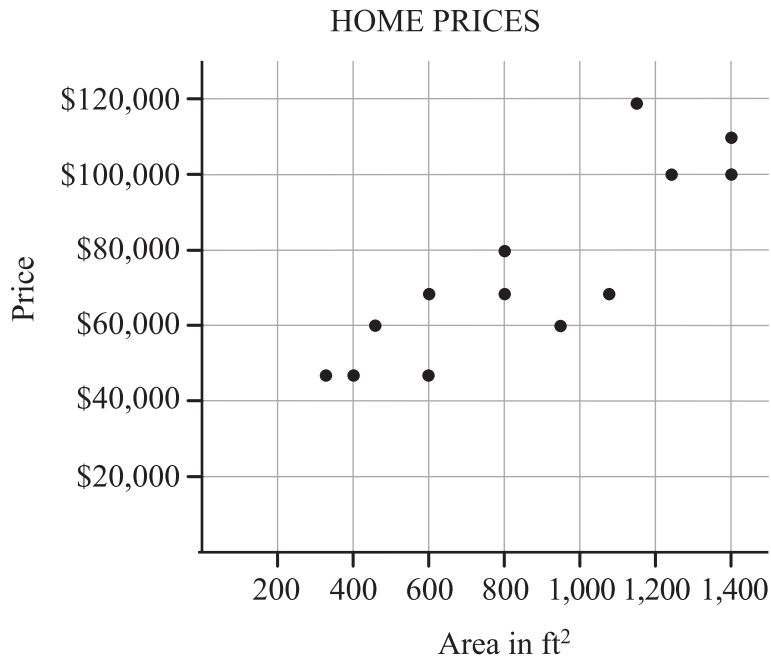


What is the area of the shaded region?  
(area of a circle =  $\pi r^2$ )

- (A)  $24 - 6\pi \text{ cm}^2$   
(B)  $24 - 9\pi \text{ cm}^2$   
(C)  $36 - 6\pi \text{ cm}^2$   
(D)  $36 - 9\pi \text{ cm}^2$

14. There are 4 more girls than boys in Ms. Alexander's class. If there are 8 boys in the class, what fraction of the class is boys?
- (A)  $\frac{2}{5}$   
(B)  $\frac{1}{2}$   
(C)  $\frac{3}{5}$   
(D)  $\frac{2}{3}$
15. The number of calories,  $y$ , an adult can burn by jumping rope depends upon the number of hours,  $x$ , spent jumping rope, according to the formula  $y = 250x + 10$ . What is the meaning of 10 in this formula?
- (A) For every 10 hours spent jumping rope, 1 calorie is burned.  
(B) For every 1 hour spent jumping rope, 10 calories are burned.  
(C) When 0 hours are spent jumping rope, 10 calories are burned.  
(D) When 250 hours are spent jumping rope, 10 calories are burned.
16. On a map, 4 centimeters equals 100 kilometers. If two cities are 10 centimeters apart on the map, what is their actual distance apart?
- (A) 25 km  
(B) 250 km  
(C) 400 km  
(D) 1000 km

17. According to the scatter plot, how much would a person expect a 1,000 ft<sup>2</sup> home to cost?



- (A) \$40,000
- (B) \$60,000
- (C) \$80,000
- (D) \$100,000

18. A bag contains 1 green, 2 red, and 2 blue marbles. A marble is selected at random and replaced before a second marble is selected. Based on this scenario, which sentence describes complementary events?

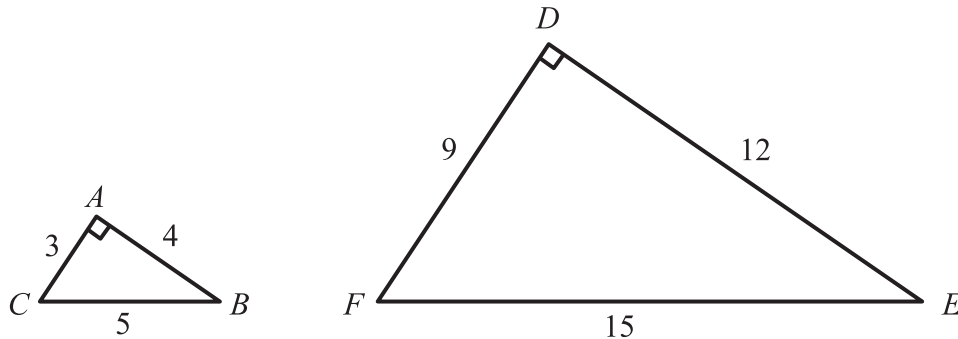
- (A) The first marble is red, and the second marble is green.
- (B) The first marble is blue, and the second marble is blue.
- (C) The first marble is green, and the second marble is blue or red.
- (D) The first marble is green, and the second marble is red or green.

19. What is the value of  $n$  in the equation

$$3\frac{1}{5} \div 1\frac{2}{3} = n?$$

- (A)  $1\frac{11}{20}$
- (B)  $1\frac{23}{25}$
- (C)  $3\frac{3}{10}$
- (D)  $5\frac{1}{3}$

20. Triangle  $ABC$  is similar to triangle  $DEF$ .

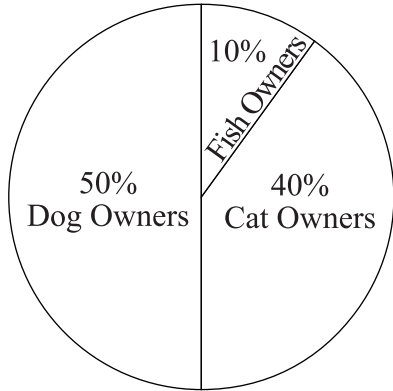


What is the ratio of the length of a side of triangle  $ABC$  to the corresponding side of triangle  $DEF$ ?

- (A) 1 to 3  
 (B) 1 to 4  
 (C) 3 to 1  
 (D) 4 to 1
- 
21. In the equation  $\frac{N}{24} = \frac{14}{21}$ , what is the value of  $N$ ?
- (A) 7  
 (B) 16  
 (C) 17  
 (D) 36
22. What is the slope of the line  $4x - 7y = -14$ ?
- (A)  $\frac{4}{7}$   
 (B)  $\frac{7}{4}$   
 (C) 4  
 (D) 7
23. Joey has 4 pairs of pants, 6 shirts, and 2 pairs of shoes, but only 1 favorite pair of pants, 1 favorite shirt, and 1 favorite pair of shoes. If he randomly selects an outfit to wear, what is the probability that it will be his favorite pair of pants, his favorite shirt, and his favorite pair of shoes?
- (A)  $\frac{1}{48}$   
 (B)  $\frac{1}{12}$   
 (C)  $\frac{12}{48}$   
 (D)  $\frac{1}{3}$



24. Missy conducted a survey to find out how many of her classmates had dogs, cats, or fish. She displayed the results in the circle graph shown.

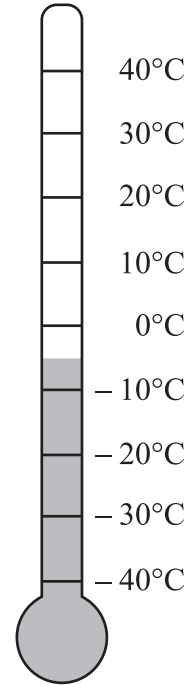


Which data correspond to the sample of pet owners?

- (A) 10 dog owners, 5 cat owners, 5 fish owners  
 (B) 10 dog owners, 8 cat owners, 2 fish owners  
 (C) 10 dog owners, 10 cat owners, 5 fish owners  
 (D) 10 dog owners, 10 cat owners, 10 fish owners
25. The expression  $\frac{a}{c} \left( \frac{c}{b} - \frac{a}{b} \right)$  is equivalent to which expression?

- (A)  $\frac{ac - 2a}{bc}$   
 (B)  $\frac{ac - a^2}{c}$   
 (C)  $\frac{a}{b} \left( 1 - \frac{a}{c} \right)$   
 (D)  $\frac{a}{b} \left( 1 - \frac{1}{c} \right)$

26. Tom's soccer coach has a rule that the team cannot play until the temperature is 22°C. The current temperature is given below.



By approximately how many degrees must the temperature increase before the team can play?

- (A) -5°C  
 (B) 17°C  
 (C) 22°C  
 (D) 27°C
27. In the equation  $x - 7 + 2 = y$ , what is the value of  $(x - y)$ ?
- (A) -9  
 (B) -5  
 (C) 5  
 (D) 9

28. The figure shows the first five elements of a dot pattern.



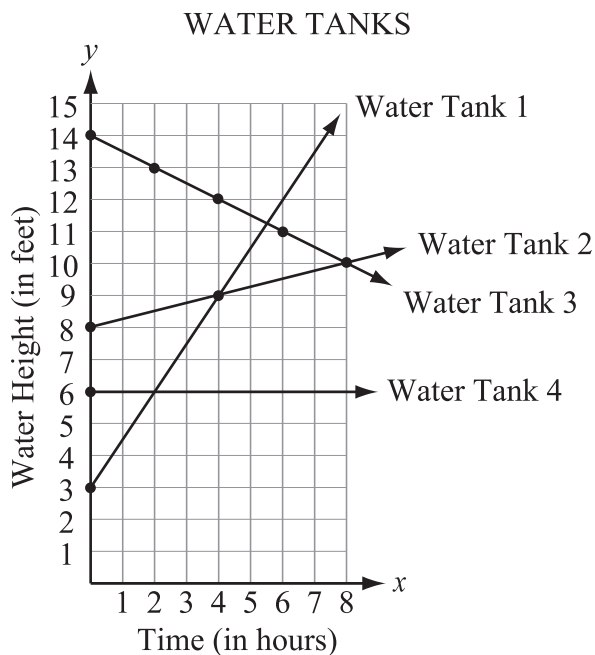
What is the sixth element of this pattern?

- (A)
- (B)
- (C)
- (D)

29. Of the 45% of a class that passed the oral part of an exam,  $\frac{2}{3}$  passed the written part as well. What fraction of the class passed both parts of the exam?

- (A)  $\frac{3}{20}$
- (B)  $\frac{3}{10}$
- (C)  $\frac{30}{45}$
- (D)  $\frac{27}{40}$

30. The graph shows the water level in each of four different water tanks over an 8-hour period.



Which water tank has the greatest hourly increase in water level?

- (A) Water Tank 1
  - (B) Water Tank 2
  - (C) Water Tank 3
  - (D) Water Tank 4
31. If  $\frac{3}{5}$  of a bucket can be filled in one minute, how many minutes will it take to fill the rest of the bucket at the same rate?
- (A) 0.40
  - (B) 0.67
  - (C) 1.60
  - (D) 1.67

32. A spinner has 3 equal-sized sections that are colored red, blue, and yellow. A number cube has 6 sides numbered 1 through 6. Using an outcome table, Jake wants to find the probability of spinning red on the spinner and rolling a number that is a factor of 6 on the number cube. Which table is shaded in a way that will help Jake find the answer?

(A)

Red 1	Red 2	Red 3	Red 4	Red 5	Red 6
Blue 1	Blue 2	Blue 3	Blue 4	Blue 5	Blue 6
Yellow 1	Yellow 2	Yellow 3	Yellow 4	Yellow 5	Yellow 6

(B)

Red 1	Red 2	Red 3	Red 4	Red 5	Red 6
Blue 1	Blue 2	Blue 3	Blue 4	Blue 5	Blue 6
Yellow 1	Yellow 2	Yellow 3	Yellow 4	Yellow 5	Yellow 6

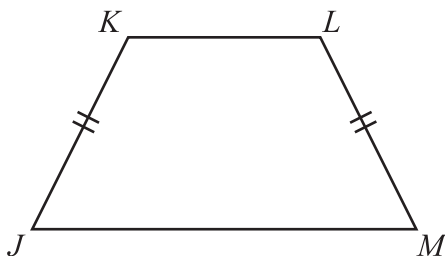
(C)

Red 1	Red 2	Red 3	Red 4	Red 5	Red 6
Blue 1	Blue 2	Blue 3	Blue 4	Blue 5	Blue 6
Yellow 1	Yellow 2	Yellow 3	Yellow 4	Yellow 5	Yellow 6

(D)

Red 1	Red 2	Red 3	Red 4	Red 5	Red 6
Blue 1	Blue 2	Blue 3	Blue 4	Blue 5	Blue 6
Yellow 1	Yellow 2	Yellow 3	Yellow 4	Yellow 5	Yellow 6

33. Use the diagram shown to answer the question.



Which type of quadrilateral is  $JKLM$ ?

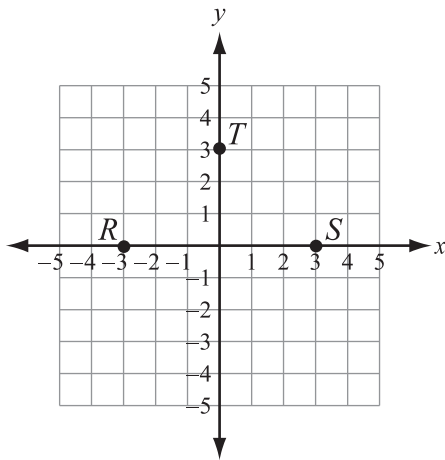
- (A) rectangle
- (B) rhombus
- (C) square
- (D) trapezoid

34. Which is equivalent to the following equation?

$$x = \frac{y}{2} - 3$$

- (A)  $y + 3 = \frac{x}{2}$
- (B)  $2x + y = 3$
- (C)  $2(x + y) = 3$
- (D)  $\frac{1}{2}y = 3 + x$

35. Rita is plotting a square on the coordinate system shown.



Three of the square's vertices are designated as points  $R$ ,  $S$ , and  $T$ . What are the coordinates of the fourth vertex of the square?

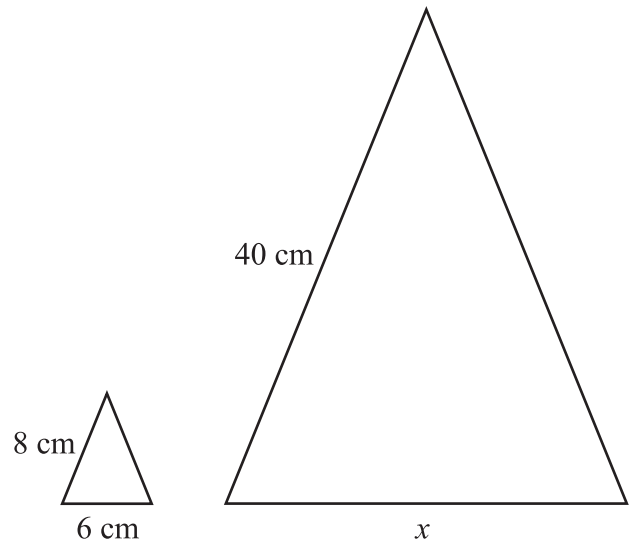
- (A)  $(0, 3)$   
 (B)  $(0, -3)$   
 (C)  $(3, 0)$   
 (D)  $(-3, 0)$
36. What is the value of the expression  $0.35 + 0.2 + 1.4 + 2.78$ ?
- (A) 3.63  
 (B) 4.19  
 (C) 4.55  
 (D) 4.73
37. The surface area of a cube is  $216 \text{ ft}^2$ . What is the volume of the cube?
- (A)  $6 \text{ ft}^3$   
 (B)  $36 \text{ ft}^3$   
 (C)  $54 \text{ ft}^3$   
 (D)  $216 \text{ ft}^3$

38. Which expression is the equivalent to the expression shown?

$$\frac{6(\sqrt{81} + 18x)}{\sqrt{9}}$$

- (A)  $2(3 + 6x)$   
 (B)  $2(9 + 18x)$   
 (C)  $\frac{\sqrt{648} + 108x}{\sqrt{9}}$   
 (D)  $\frac{6\sqrt{99x}}{\sqrt{9}}$

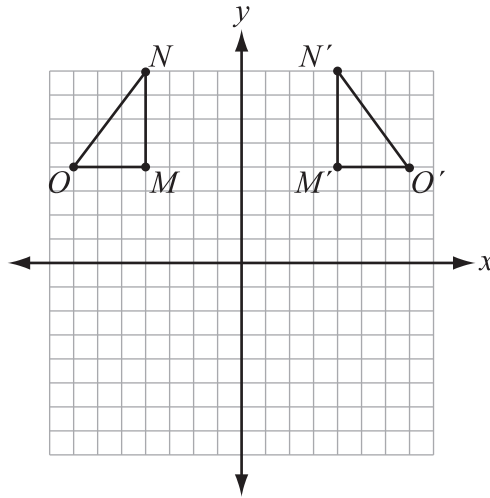
39. The triangles shown are similar.



What is the value of  $x$ ?

- (A) 14  
 (B) 30  
 (C) 38  
 (D) 52

40. Triangle  $MNO$  has been transformed to produce the image  $M'N'O'$ .



What type of transformation was performed?

- (A) reflection
  - (B) rotation
  - (C) slide
  - (D) turn
41. The Playmakers are planning their summer production. Profit is revenue minus cost. The production will cost between \$2,500 and \$3,000. The production will run for 14 nights with an expected audience average of from 100 to 200 people per night. If the tickets cost \$8 each, approximately what is the expected profit for this production?
- (A) \$9,000
  - (B) \$14,000
  - (C) \$19,000
  - (D) \$38,000

42. The graph shows  $\overline{RS}$ .



What is the equation for the line perpendicular to  $\overline{RS}$  at  $(10, 5)$ ?

- (A)  $y = -\frac{2}{5}x + 9$
- (B)  $y = -\frac{2}{5}x - 9$
- (C)  $y = \frac{5}{2}x + 20$
- (D)  $y = \frac{5}{2}x - 20$



# ISEE®

## Essay

### MIDDLE LEVEL

### Practice Test



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## Essay Topic Sheet

The directions for the Essay portion of the ISEE are printed in the box below. Use the pre-lined pages in Appendix B (pages 149–150) for this part of the Practice Test.

**Note:** The page references in the directions below refer to the page numbers at the bottom of the answer sheet, not to the page numbers of the *What to Expect on the ISEE* book.

You will have 30 minutes to plan and write an essay on the topic printed on the other side of this page. **Do not write on another topic. An essay on another topic is not acceptable.**

The essay is designed to give you an opportunity to show how well you can write. You should try to express your thoughts clearly. How well you write is much more important than how much you write, but you need to say enough for a reader to understand what you mean.

You will probably want to write more than a short paragraph. You should also be aware that a copy of your essay will be sent to each school that will be receiving your test results. You are to write only in the appropriate section of the answer sheet. Please write or print so that your writing may be read by someone who is not familiar with your handwriting.

You may make notes and plan your essay on the reverse side of the page. Allow enough time to copy the final form onto your answer sheet. You must copy the essay topic onto your answer sheet, on page 3, in the box provided.

Please remember to write only the final draft of the essay on pages 3 and 4 of your answer sheet and to write it in blue or black pen. Again, you may use cursive writing or you may print. Only pages 3 and 4 will be sent to the schools.

*Directions continue on the next page.*



**REMINDER:** Please write this essay topic on the first few lines of page 3 of your answer sheet.

**Essay Topic**

**If you could travel anywhere in the world, where would you go? Explain where you would go and why.**

- Only write on this essay question
- Only pages 3 and 4 will be sent to the schools
- Only write in blue or black pen

**Notes**

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**SCORING THE  
PRACTICE TEST  
ISEE<sup>®</sup>  
MIDDLE LEVEL**



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## Step-by-Step Directions

When you have finished all five sections of the Practice Test, you will be ready to grade and score your test. Follow the steps on these next pages exactly as written, and you will soon know your score and how you did compared to other students who have taken a similar practice test, except for the essay.

You will have three scores when you finish: your raw score, your scaled score range, and your quartile ranking. As you determine these three scores, enter them in the table below.

**ISEE PRACTICE TEST SCORING**

	<b>Verbal Reasoning</b>	<b>Quantitative Reasoning</b>	<b>Reading Comprehension</b>	<b>Mathematics Achievement</b>
1. Raw Score				
2. Scaled Score Range				
3. Quartile				

### Finding Your Raw Score

The number of questions that you have answered correctly is called your “raw score.” As you will see, you get one point for every question that you answer correctly, but no points for a question you answer incorrectly or omit.

1. Turn to page 125 and place your answer sheet beside the column headed Verbal Reasoning.
2. Enter the answer that you chose for question 1 in the “Your Answer” column. Next, move to the column to the right and put a “+” if your answer is correct. Leave this box blank if your answer is wrong or if you skipped this question.
3. Continue until you have entered your answers beside the correct answers to each of the 35 Verbal Reasoning questions.
4. Move your Practice Test answer sheet beside the column headed Quantitative Reasoning on page 126 and follow steps 2 and 3 above. (*Note: Although the Practice Test Answer Key lists questions by NCTM standards, on the actual Individual Student Report (ISR), this section lists your results by type of question.*)
5. Move to Reading Comprehension (page 127) and Mathematics Achievement (page 128) in turn and follow steps 2 and 3 above. Remember to skip questions you did not answer as you mark down your answers.
6. Count the total number of correct (+) answers in each section. For example, if you have 12 “+” marks in Verbal Reasoning, write 12 next to Total Correct.
7. Count each section separately and write down the number of correct answers next to Total Correct. These are your raw scores.
8. **Enter the raw scores for each section on line 1 of the table above.**

**For a full explanation of scaled scores, percentiles and stanines, please see the “Understanding the Individual Student Report (ISR)” section of this book.**

## Finding Your Scaled Score

You will need to convert (change) your raw score to a scaled score to see what it means and how you compare with other students who took a similar test. This step is necessary because there are different forms of the ISEE, and the scaled score helps the people who score the ISEE compare your score with other scores. We have provided a scaled score range for each raw score, because the Practice Test that you took cannot be equated exactly with the real ISEE test. The reason: the Practice Test was not taken under a real testing environment at a school or ISEE office. Nevertheless, the score you calculate here will be sufficiently close for you to feel confident in the score you can expect. Your actual ISEE score report will show a single scaled score for each section rather than the ranges shown on these conversion tables. Follow these steps exactly.

1. Turn to the conversion tables on pages 129–132. Note there are several tables (one for each section).
2. Find the correct conversion table for the raw score of the section you wish to equate. For example, in the table for Verbal Reasoning, find the line that lists the total of your correct answers (your “raw” score) on the Verbal Reasoning section. Find the reported range of scaled scores beside your raw score. **Record these numbers under the corresponding column on line 2 of the table on page 122.**
3. Repeat for the other three sections.

## Finding Your Quartile Score

Your quartile score is based on how you compare to other students applying to the same grade. Using the comparative data table that is next to the conversion table in each separate section, find the quartile that corresponds to your scaled score. **Record the quartile for each section on line 3 of the table on page 122.**

## Reviewing Your Essay

The ISEE does NOT score your essay. A copy of your essay will be made available to each school you listed to receive your scores. Each school will judge the essay independently, using its own standards. Remember, the essay and the rest of the ISEE are only two of the pieces of information admission officers will use to determine your potential for success at their schools.

For this Practice Test, we suggest that you ask an adult who knows you to read your practice essay and give you feedback about how you did, using the tips for essay writing found on page 60.

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## ISEE Practice Test Answer Keys

### Verbal Reasoning Answer Key—Middle Level (35 items)

Item	Key	Your Answer	+ If Correct	*Type
1	D			S
2	A			S
3	D			S
4	C			S
5	D			S
6	A			S
7	D			S
8	D			S
9	B			S
10	A			S
11	D			S
12	D			S
13	A			S
14	B			S
15	D			S
16	B			S
17	C			S
18	B			S
19	B			SWR
20	A			SWR
21	C			SWR
22	C			SWR
23	A			SWR
24	B			SWR
25	A			SWR
26	D			SWR
27	C			SWR
28	D			SWR
29	B			SWR
30	A			SWR
31	C			SWR
32	D			SWR
33	B			SWR
34	D			SWR
35	A			SWR
<b>TOTAL CORRECT</b>				

#### \*Key to Type of Item

**S** = Synonyms

**SWR** = Single Word Response

**Quantitative Reasoning Answer Key—Middle Level (32 items)**

Item	Key	Your Answer	+ If Correct	*Type
1	A			D
2	A			D
3	C			A
4	A			ND
5	C			M
6	B			ND
7	D			G
8	D			NW
9	B			D
10	C			A
11	C			ND
12	B			D
13	C			G
14	A			A
15	C			G
16	A			A
17	D			A
18	C			A
19	B			A
20	A			A
21	B			ND
22	B			NW
23	A			ND
24	C			A
25	A			A
26	A			D
27	B			M
28	B			M
29	A			G
30	C			D
31	B			D
32	D			ND
<b>TOTAL CORRECT</b>				

**\*Key to Type of Item**


---

<b>NW</b> = Numbers and Operations (Whole Numbers)	<b>A</b> = Algebraic Concepts
<b>ND</b> = Numbers and Operations (Decimals, Percents, Fractions)	<b>G</b> = Geometry
	<b>M</b> = Measurement
	<b>D</b> = Data Analysis and Probability

(On the actual Individual Student Report, your results for Quantitative Reasoning will only list Word Problems and Quantitative Comparisons.)



**Reading Comprehension Answer Key—Middle Level (30 items)**

Item	Key	Your Answer	+ If Correct	*Type
1	D			MI
2	C			I
3	C			SI
4	B			V
5	C			SI
6	C			O/L
7	C			SI
8	A			I
9	A			O/L
10	B			V
11	A			SI
12	B			O/L
13	C			MI
14	C			V
15	B			SI
16	B			SI
17	D			T/S/F
18	B			O
19	C			MI
20	D			I
21	A			SI
22	B			I
23	A			T/S/F
24	A			SI
25	B			MI
26	A			SI
27	A			SI
28	A			T/S/F
29	D			SI
30	C			O
<b>TOTAL CORRECT</b>				

**\*Key to Type of Item**

- MI** = Main Idea  
**SI** = Supporting Ideas  
**I** = Inference  
**V** = Vocabulary  
**O/L** = Organization/Logic  
**T/S/F** = Tone/Style/Figurative Language

**Mathematics Achievement Answer Key—Middle Level (42 items)**

Item	Key	Your Answer	+ If Correct	*Type	Item	Key	Your Answer	+ If Correct	*Type
1	D			NW	22	A			A
2	B			NW	23	A			D
3	B			ND	24	B			D
4	D			NW	25	C			ND
5	C			A	26	D			M
6	C			D	27	C			NW
7	B			D	28	C			A
8	D			A	29	B			ND
9	B			NW	30	A			A
10	A			A	31	B			M
11	B			NW	32	A			D
12	C			ND	33	D			G
13	D			M	34	D			A
14	A			ND	35	B			G
15	C			A	36	D			ND
16	B			NW	37	D			M
17	C			D	38	B			ND
18	C			D	39	B			G
19	B			ND	40	A			G
20	A			M	41	B			NW
21	B			D	42	D			A
					<b>TOTAL CORRECT</b>				

**\*Key to Type of Item**

---

**NW** = Numbers and Operations (Whole Numbers)      **A** = Algebraic Concepts  
**ND** = Numbers and Operations (Decimals, Percents, Fractions)      **G** = Geometry  
**M** = Measurement  
**D** = Data Analysis and Probability

## Practice Test Conversion Tables and Percentiles (Quartiles)

### Verbal Reasoning Conversion Table—Middle Level

<b>2018 ISEE Practice Tests Scaled Score Ranges (Min. = 778 and Max. = 922)</b>		
<b>Raw Score</b>	<b>*Reported Range</b>	
35	892	922
34	889	919
33	885	915
32	882	912
31	879	909
30	876	906
29	872	902
28	869	899
27	866	896
26	863	893
25	860	890
24	856	886
23	853	883
22	850	880
21	847	877
20	843	873
19	840	870
18	837	867
17	833	863
16	830	860
15	827	857
14	823	853
13	820	850
12	817	847
11	814	844
10	810	840
9	807	837
8	804	834
7	801	831
6	798	828
5	794	824
4	791	821
3	788	818
2	785	815
1	782	812
0	778	808

<b>Comparative Data Scaled Score Quartiles Based on 2017–2018 ISEE Norms</b>			
<b>Applicants to Grade</b>	<b>75th</b>	<b>50th</b>	<b>25th</b>
7	878	863	846
8	883	870	850

\* Minimum reported range is 30 points wide.

**Quantitative Reasoning Conversion Table—Middle Level**

<b>2018 ISEE Practice Tests Scaled Score Ranges (Min. = 793 and Max. = 931)</b>		
<b>Raw Score</b>	<b>*Reported Range</b>	
32	901	931
31	898	928
30	894	924
29	891	921
28	888	918
27	884	914
26	881	911
25	878	908
24	874	904
23	871	901
22	868	898
21	864	894
20	861	891
19	858	888
18	854	884
17	851	881
16	847	877
15	844	874
14	841	871
13	837	867
12	834	864
11	830	860
10	827	857
9	823	853
8	820	850
7	817	847
6	813	843
5	810	840
4	807	837
3	803	833
2	800	830
1	796	826
0	793	823

<b>Comparative Data Scaled Score Quartiles Based on 2017–2018 ISEE Norms</b>			
<b>Applicants to GRADE</b>	<b>75th</b>	<b>50th</b>	<b>25th</b>
7	886	870	855
8	892	875	859

\*Minimum reported range is 30 points wide.

**Reading Comprehension Conversion Table—Middle Level**

<b>2018 ISEE Practice Tests Scaled Score Ranges (Min. = 764 and Max. = 923)</b>		
<b>Raw Score</b>	<b>*Reported Range</b>	
30	893	923
29	888	918
28	884	914
27	880	910
26	876	906
25	871	901
24	867	897
23	863	893
22	858	888
21	854	884
20	850	880
19	845	875
18	841	871
17	837	867
16	833	863
15	828	858
14	824	854
13	820	850
12	815	845
11	811	841
10	807	837
9	802	832
8	798	828
7	794	824
6	789	819
5	785	815
4	781	811
3	776	806
2	772	802
1	768	798
0	764	794

<b>Comparative Data Scaled Score Quartiles Based on 2017–2018 ISEE Norms</b>			
<b>Applicants to GRADE</b>	<b>75th</b>	<b>50th</b>	<b>25th</b>
7	882	864	843
8	886	871	848

\* Minimum reported range is 30 points wide.

**Mathematics Achievement Conversion Table—Middle Level**

<b>2018 ISEE Practice Tests Scaled Score Ranges (Min. = 799 and Max. = 936)</b>		
<b>Raw Score</b>	<b>*Reported Range</b>	
42	906	936
41	903	933
40	900	930
39	898	928
38	895	925
37	893	923
36	890	920
35	888	918
34	885	915
33	883	913
32	880	910
31	878	908
30	875	905
29	872	902
28	870	900
27	867	897
26	865	895
25	862	892
24	860	890
23	857	887
22	855	885
21	852	882
20	850	880
19	847	877
18	844	874
17	842	872
16	839	869
15	837	867
14	834	864
13	832	862
12	829	859
11	827	857
10	824	854
9	822	852
8	819	849
7	817	847
6	814	844
5	812	842
4	809	839
3	807	837
2	804	834
1	802	832
0	799	829

<b>Comparative Data Scaled Score Quartiles Based On 2017–2018 ISEE Norms</b>			
<b>Applicants to GRADE</b>	<b>75th</b>	<b>50th</b>	<b>25th</b>
7	886	872	859
8	894	878	864

\*Minimum reported range is 30 points wide.

**UNDERSTANDING THE  
INDIVIDUAL STUDENT  
REPORT (ISR)**

**ISEE<sup>®</sup>**

**MIDDLE LEVEL**



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### Sample Individual Student Report (ISR)



**Candidate for Grade** 7  
**ID Number** 234567  
**Gender** Female  
**Date of Birth** 07/27/1998  
**Phone Number** 910-555-2345  
**Test Level/Form** Middle/72  
**Date of Testing** 12/05/2009  
**Tracking Number** 200912100995

## Individual Student Report

**Maria G Sanchez**  
**6 Galaxy Way**  
**Memphis, TN 37501**

The Test Profile below shows your total scores for each section. Refer to the enclosed brochure called Understanding the Individual Student Report to help you interpret the Test Profile and Analysis. Percentile Ranks and Stanines are derived from norms for applicants to independent schools.

### TEST PROFILE

Section	Scaled Score (760 – 940)	Percentile Rank (1 – 99)	Stanine (1 – 9)	Stanine Analysis														
				1	2	3	4	5	6	7	8	9						
Verbal Reasoning	867	59	5					■	V	■								
Reading Comprehension	876	62	6															■ R ■
Quantitative Reasoning	877	64	6															■ Q ■
Mathematics Achievement	878	58	5															■ M ■

**LEGEND:** V = Verbal Reasoning R = Reading Comprehension Q = Quantitative Reasoning M = Mathematics Achievement

### ANALYSIS

Section & Subsection	# of Questions	# Correct	Results for Each Question
<b>Verbal Reasoning</b>			
Synonyms	18	13	++++ - + - + - + +++++ -
Single Word Response	17	12	+++++++ - +++S+NNN
<b>Quantitative Reasoning</b>			
Word Problems	18	12	+ - + - +++++ - ++ - + - + - +
Quantitative Comparisons	14	11	+++++ - +++++ - - ++
<b>Reading Comprehension</b>			
Main Idea	5	4	+++ - +
Supporting Ideas	7	4	+ - + - + - +
Inference	6	4	- + - +++
Vocabulary	7	5	++++ - - +
Organization/Logic	3	2	+ - +
Tone/Style/Figurative Language	2	1	- +
<b>Mathematics Achievement</b>			
Whole Numbers	7	6	+++ - +++
Decimals, Percents, Fractions	8	7	+++++ - ++
Algebraic Concepts	11	9	+++++ - + - +++++
Geometry	5	3	- + - +
Measurement	5	4	+++ - +
Data Analysis and Probability	6	2	++ - - - N

**LEGEND:** + = Correct - = Incorrect S = Skipped N = Not Reached

The test was administered in the order reported in the analysis section; Verbal Reasoning, Quantitative Reasoning, Reading Comprehension, and Mathematics Achievement. Each section was divided into subsections, grouping similar types of questions. The Reading Comprehension subsection grouping does not represent the actual order of the test questions.

At your request, your ISEE scores and a copy of your essay have been sent to the schools or consultants listed below. To have your scores sent to other schools or consultants, order additional reports using the enclosed form.

Code School/Consultant Code School/Consultant  
 000000 Your School

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**Figure 1. Sample Score Report – Middle Level**



The *Independent School Entrance Exam* (ISEE) consists of verbal and quantitative reasoning sections, mathematics and reading comprehension achievement sections, and an essay that demonstrates a student’s writing skills. The **reasoning sections (Verbal and Quantitative)** measure what a student is capable of achieving or learning; the **Mathematics Achievement and Reading Comprehension** sections show how well the student understands concepts already studied.

The purpose of this section of this book is to help students and their parents understand the information presented in the *Individual Student Report* (ISR). The ISR is a concise and useful summary of the student’s performance on the ISEE. Different parts of the report provide information that may be used in the admission process to understand, compare, and evaluate student performance. A complete, actual sample ISR is shown on the previous page (Figure 1). Two parts of the report—the Test Profile and Analysis—are explained on the following pages.

### Test Profile

The Test Profile near the top of the report provides information about the student’s overall performance on each section of the ISEE, except the essay; an unscored copy of the essay is sent to each school for which the student requests score reports.

Figure 2 shows the Test Profile from the sample ISR in Figure 1.

Section	Scaled Score (760 – 940)	Percentile Rank (1 – 99)	Stanine (1 – 9)	Stanine Analysis														
				1	2	3	4	5	6	7	8	9						
Verbal Reasoning	867	59	5					■	V	■								
Reading Comprehension	876	62	6															■
Quantitative Reasoning	877	64	6															■
Mathematics Achievement	878	58	5															■

LEGEND: V = Verbal Reasoning R = Reading Comprehension Q = Quantitative Reasoning M = Mathematics Achievement

**Figure 2. Sample Test Profile**

The ISEE scores are reported in four ways in order to provide a comprehensive picture of the student’s performance:

- Scaled Scores
- Percentile Rank
- Stanine
- Stanine Analysis

The Test Profile reports ISEE scores both as scaled scores and as percentile ranks with reference to ISEE norms. These norms are based on independent school applicants in the same grade who have taken the ISEE during the past three years. The Test Profile also shows stanines and a stanine analysis. These terms are discussed on the following pages.

The norm group for this test is a very competitive group of students who are applying to independent schools. Therefore, a student is compared only to other students in the same grade who have applied to independent schools in the last three years. Given that this is a competitive group of students, a student's performance may be less than what it has been on other tests where the comparison group is less selective. Admission offices are aware of this difference in the norming populations and do not expect all applicants to be "above" the norm.

### Scaled Scores

ISEE scaled scores for each section range from 760 to 940. The scaled score is derived from the raw score—the number of questions the student answered correctly—but is more useful than the raw score because the scaled score has the same meaning regardless of which version of the test was used. ERB administers many different versions of the test each year. The scaled score takes these slight differences into account and allows ERB to report a score on a common scale that has the same meaning for all students, regardless of the version taken.

### Percentile Rank

The percentile rank shows the student's standing when compared to other students in the norm group for this examination. The rank is based on scores obtained from all students in a given grade who have taken the test over the past three years. Percentile rank scores range from 1 to 99. A percentile rank of 58 on Mathematics Achievement, for example, as depicted in Figure 2, indicates that the student scored as well as or better than 58 percent of all students in the norm group and less well than 41 percent (out of a total of 99 percentile points).

Small differences in percentile ranks on different tests may or may not represent significant differences in performance on those sections. For this reason, ISEE scores are also reported as stanines.

### Stanine

A stanine is a score from 1 to 9, with 5 as the midpoint. Stanines are derived by dividing the entire range of students' scores into 9 segments, as follows:

Percentile Rank	Stanine
1–3	1
4–10	2
11–22	3
23–39	4
40–59	5
60–76	6
77–88	7
89–95	8
96–99	9

### Stanine Analysis

The stanine analysis permits comparisons between a student’s performance on both the ability tests and the related achievement tests. Specifically, these comparisons are made between Verbal Reasoning (V) and Reading Comprehension (R), and between Quantitative Reasoning (Q) and Mathematics Achievement (M). Each letter in the stanine analysis box in the Test Profile is the midpoint of a band that extends to either side of the stanine score. The percentile score is an estimate of a student’s ability or knowledge. We can be reasonably certain that a student’s “true score” falls within the band reflected by a particular stanine. If the stanine is 5, for example, the percentile rank range is 40–59.

In the example shown in Figure 2, the band for Reading Comprehension (R) is a bit higher than, but still overlaps, the band for Verbal Reasoning (V). This indicates that the student’s performance in reading is mostly consistent with the estimate of her verbal reasoning ability. To a degree, because the band for Reading Comprehension is slightly to the right of the band for Verbal Reasoning, we can infer that the student was performing better than expected. Conversely, if the Reading Comprehension band were completely to the left of the Verbal Reasoning band, we could be reasonably certain that the student was working below her potential. The same kinds of comparisons can be made between the Mathematics Achievement and the Quantitative Reasoning bands.

### Analysis

In the Analysis portion of the ISR, each section score indicates the number of questions answered correctly, the number of questions answered incorrectly, and the number of questions omitted or not reached. Each section score is broken out by type of question, providing more specific information about a student’s relative strengths and weaknesses.

Figure 3 shows the Analysis part of the sample ISR in Figure 1.

Section & Subsection	# of Questions	# Correct	Results for Each Question
<b>Verbal Reasoning</b>			
Synonyms	18	13	++++ - + - + - + - +++++ -
Single Word Response	17	12	+++++++ - +++++S+NNN
<b>Quantitative Reasoning</b>			
Word Problems	18	12	+ - + - +++++ - ++ - + - + - +
Quantitative Comparisons	14	11	+++++ - +++++ - - ++
<b>Reading Comprehension</b>			
Main Idea	5	4	+++ - +
Supporting Ideas	7	4	+ - + - + - +
Inference	6	4	- + - + + +
Vocabulary	7	5	++++ - - +
Organization/Logic	3	2	+ - +
Tone/Style/Figurative Language	2	1	- +
<b>Mathematics Achievement</b>			
Whole Numbers	7	6	+++ - + + +
Decimals, Percents, Fractions	8	7	+++++ - ++
Algebraic Concepts	11	9	++++ - + - + + + +
Geometry	5	3	- ++ - +
Measurement	5	4	+++ - +
Data Analysis and Probability	6	2	++ - - - N

**LEGEND:** + = Correct                      - = Incorrect                      S = Skipped                      N = Not Reached

**Figure 3. Sample Analysis**

In the first column, each section is broken down into curricular areas and/or skills. The next two columns show the number of questions and the number the student answered correctly for each subsection. The symbols in the fourth and final column indicate whether the student answered each individual question in the subsection correctly (+), answered the question incorrectly (–), skipped the question (S), or did not reach the question (N). Questions coded S are those that appear to have been deliberately skipped by the student, since subsequent questions in the subsection were answered. Questions coded N are at the end of the section (not necessarily at the end of the subsection) and were not answered, perhaps because the student ran out of time.

For all levels, the left-to-right sequence of symbols in the fourth column reflects the order of the questions in the section. In general, questions on each section are ordered by difficulty, with the easier questions at the beginning and the harder questions at the end. This is not the case for Reading Comprehension, however, as questions in that section are placed in logical order as they relate to the associated reading passage.

### **Verbal Reasoning**

The Verbal Reasoning section includes 16–18 synonym questions and 17–19 sentence completion questions (single word response) for a total of 35 questions. The synonyms assess a student’s vocabulary as well as his or her ability to understand relationships among words and subtle differences in meaning. In Figure 3, we can see that this student attempted to answer all 18 synonym questions, though she answered five of these incorrectly. Interestingly, four of the five incorrect answers clustered in the middle of the subsection; these questions were neither among the easiest nor were they among the hardest on the test.

Sentence completion requires the student to successfully integrate information beyond the immediate context of the phrase/sentence and incorporate subsuming concepts and ideas presented in the text using syntactic and semantic cues. The student profiled in Figure 3 appears to have focused her efforts on those items she thought she could answer correctly; though she skipped one and did not reach three items, she had only one incorrect answer among those she attempted.

### **Quantitative Reasoning**

This section requires the student to show an understanding of concepts by using logical reasoning, synthesis, skill, and comprehension. There are 18 word problems and 14 quantitative comparison problems in the Quantitative Reasoning section, for a total of 32 questions. To solve a word problem, the student must invoke a rule and then apply it. The quantitative comparison questions present two quantities and require the student to determine whether one of the quantities is greater, whether they are equal, or whether the information given is insufficient to make a determination.

In the fourth column of Figure 3, we can see by the absence of Ss and Ns that the student attempted every Quantitative Reasoning question. In addition, we can see that the student missed a number of relatively easy items in the word problems subsection. We might infer from these observations that the student proceeded too quickly through the Quantitative Reasoning section, thus making mistakes she might not otherwise have made.

## Reading Comprehension

The Reading Comprehension section has 30 questions: six questions for each of five passages. These include questions on main idea, supporting ideas, inference, vocabulary, organization/logic, and tone, style, and figurative language. Unlike questions on other test sections, which are ordered by difficulty, the Reading Comprehension questions are listed in the order they appear on the test within each of the reading passage sections. Figure 3 indicates that this student attempted to answer all 30 items; the pattern of correct and incorrect answers suggests her strengths (and weaknesses) range across all six strands.

## Mathematics Achievement

There are 42 items on the Mathematics Achievement section covering six skill areas. In line with a traditional notion of mathematics achievement, these items call for the identification of and solutions to problems requiring one or more steps in calculation. The student whose performance is depicted in Figure 3 seems to have good mastery of the concepts of whole numbers; decimals, percents and fractions; and measurement. She may be slightly weaker in algebraic concepts and geometry, and appears to have particular difficulty with data analysis and probability.

## Conclusion

### Putting the ISEE in Perspective

It is helpful to remember that students in more than one grade are taking a particular level of the ISEE. Therefore it is possible that some of the questions may seem particularly difficult to you because you may not have learned some of the concepts in school yet. Your score on the ISEE is compared *to only students in your grade*, and those students are probably learning about the same things that you are. In that case, good preparation for the test includes being attentive in school and keeping up with your class work and homework. There are no benefits to frantically reviewing materials at the last minute, and in fact, you will probably make yourself very anxious if you do this. It is more important to get a good night's sleep the night before and to have a proper breakfast. Remember that your ISEE scores are only part of the admission process. Schools also want to know about you as a person and what you can contribute to their school community.

We wish you the best of luck in your school search and hope that this book has been helpful in showing you what to expect on the ISEE. For more information, please visit ERB's web site at [www.erblearn.org](http://www.erblearn.org).

# APPENDICES

# ISEE<sup>®</sup>

## MIDDLE LEVEL



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## Appendix A

### ISEE Content and Specifications

The sample questions and practice tests represent actual questions from previous tests, as well as newly developed questions similar to the ones students will find on the current ISEE. As a result, students get the best examples of the kinds of questions and the approximate level of difficulty that they will find when they take the ISEE. The purpose of this appendix is to provide students and their parents with additional information about the ISEE.

#### Verbal Reasoning

Over the past century, academic and behavioral research have identified specific abilities that are relevant to academic performance and, therefore, can be used as predictors of academic success. Verbal reasoning and quantitative reasoning are among those abilities and are an integral part of the ISEE.

Verbal reasoning is the ability to reason, infer, and interpret words, sentences, and discourse in order to extract meaning and solve problems. The student must recognize relationships, make contrasts and comparisons, follow logic, analyze problems, and think critically about what is being asked or expressed. Item types that are often used for verbal reasoning include the following: extracting explicit information, following directions, inferring word or phrase meaning, determining main idea of text, analyzing similar and dissimilar concepts and situations, and evaluating strength and logic of arguments.

The Verbal Reasoning section of the ISEE is comprised of two kinds of questions: synonyms and sentence completions. Both of these kinds of questions test the depth and breadth of the student's vocabulary, and both test reasoning ability in different ways. Synonyms focus more on word recognition and the ability to understand the relationships of other words and to discriminate among subtle differences in meaning. The reasoning function of synonyms takes place when the student must choose the word that is closest in meaning to the prompt word from among two or more related answer choices.

Sentence completion questions not only test vocabulary, but also measure a student's knowledge of words and their functions. The student must use both syntactic and semantic information within the text and identify cues within the given sentence and across sentences. The student will be required to successfully integrate information beyond the immediate context of the phrase/sentence and incorporate subsuming concepts and ideas presented in the text. In the Middle Level forms of the ISEE, the sentence completion answer choices are words that provide a logical completion to the sentence fragment in the test item.

The following table shows the total number of test items in the actual Middle Level Verbal Reasoning section.

**VERBAL REASONING SECTION**

Item Type	Number of Items
Synonyms	17–23
Sentence Completion (Single Word Response)	17–23
<b>Total Items for Verbal Reasoning Section</b>	<b>40</b>

Of the 40 total items, 35 are scorable items reported on the Individual Student Report (ISR), and 5 are unscored items that may be used on future versions of the ISEE.

## Quantitative Reasoning

The Quantitative Reasoning section has the student show that he or she can do more than recall and recognize facts, definitions, and symbols; read a graph and compute using standard algorithms; or estimate answers to computation problems. The reasoning section requires the student to show an understanding of concepts by using logical reasoning, synthesis, skill, and comprehension. These questions ask the student to relate and integrate his or her knowledge of mathematics. They allow the student to show that he or she can apply that knowledge by interpreting data, solving application problems, estimating, recognizing patterns, and solving non-routine problems. The kinds of questions that are in the Quantitative Reasoning section are often called higher-order thinking problems.

Quantitative reasoning entails the ability to use numbers and numerical concepts in order to solve problems. Questions may ask the student to recognize and apply a required numerical operation; estimate numerical values; employ logic to determine what a particular problem entails; compare and contrast quantities; analyze and interpret data; analyze, compare, predict, draw conclusions, and summarize graphs; use reason to calculate the probability of events; understand concepts and applications of measurement; and know how to arrive at statistical solutions to given problems. Questions require the student to synthesize information, determine what is relevant (and irrelevant), select appropriate analysis techniques, and apply them. The emphasis is on the ability to reason and solve problems in a quantitative context. Actual calculations may or may not be required.

The Quantitative Reasoning section on the Middle Level ISEE consists of two types of test items: word problems and quantitative comparisons.

1. The word problems differ somewhat from traditional mathematics achievement items in that some of them require no calculation. To solve a quantitative reasoning word problem, the student must invoke a rule and then apply it. The emphasis is on rule generation, hence the absence of calculation in some items and the simplicity of calculation in others.
2. The quantitative comparison items present two quantities and require the student to determine if one quantity is greater, if the quantities are equal, or if the information given is insufficient to make a determination.

The table below shows the total number of items on the actual Middle Level Quantitative Reasoning section.

### QUANTITATIVE REASONING SECTION

Item Type	Number of Items
Word Problems	18–21
Quantitative Comparisons	14–17
<b>Total Items for Quantitative Reasoning Section</b>	<b>37</b>

Of the 37 total items, 32 are scorable items reported on the ISR, and 5 are unscored items that may be used on future versions of the ISEE.



A key aspect of all quantitative reasoning word problems is that all incorrect responses are based on logical errors, not miscalculations or other errors in form. Another feature of these problems is that they may contain irrelevant information. The rationale is twofold. First, in a reasoning item, part of the problem is to sort the relevant from the irrelevant, just as a mathematician or scientist would do. Second, as students take additional tests in the future, such as college admission tests and other tests that include quantitative reasoning items, they will see more and more problems with irrelevant information. In one sense, the ISEE begins to prepare students for this experience.

## Reading Comprehension

Texts of various genres are used to assess reading comprehension, e.g., narrative, expository, persuasive, or descriptive texts. Each genre presents features particular to it and may require different reading skills to be engaged to understand and interpret the text's meaning. For example, a persuasive passage will likely require the reader to follow the logic of a set of arguments, contrast counterpoints, and evaluate the opposing points of view. A narrative, on the other hand, may demand attention to detail and the sequencing of events.

Reading comprehension may be affected not only by text type, but also by question type. Questions may ask for straightforward comprehension of what is explicitly stated in the passage, or may demand that the reader be aware of implicit ideas. The reader may need to infer, interpret, analyze, and/or synthesize information in order to arrive at a correct answer to a given question.

All ISEE Reading Comprehension test items are based on passages of varying lengths. For the Middle Level test, passage length averages 450 words. The test items that follow each reading passage measure a student's ability relative to Main Idea, Supporting Ideas, Inference, Vocabulary, Organization/Logic, and Tone/Style/Figurative Language, as described in the NCTE strands.

### *Explanation of Strands in Reading Comprehension Section*

- The *Main Idea* items assess the student's ability to look for an overall message, theme, or central idea in the passage or section of the passage.
- The *Supporting Ideas* items assess the student's ability to identify explicit ideas that support the main idea or another important concept found in the text.
- *Inference* items ask the student to draw a conclusion from content not explicitly stated in the text. Inference items may ask the student to compare and contrast ideas, interpret or analyze text, and/or predict subsequent events or outcomes.
- *Vocabulary* items deal with word definitions within the context of the passage, usually in the form of "most nearly means."
- *Organization/Logic* items ask students to identify the sequence, pattern, relationship, structure, or summary of the passage and to identify the major features of different literary genres, including narrative, informational, and instructional.
- *Tone/Style/Figurative Language* items assess the student's understanding of mood, tone, point of view, and figurative language such as simile, metaphor, images, irony, and personification.

At the Middle Level, there are six passages in the Reading Comprehension section, each followed by six questions that relate to the passage.

The following table shows the total number of items in the actual Middle Level Reading Comprehension section.

### READING COMPREHENSION SECTION

ISEE Strand	Number of Items
Main Idea	3–7
Supporting Ideas	5–12
Inference	6–13
Vocabulary	5–9
Organization/Logic	3–5
Tone/Style/Figurative Language	1–4
<b>Total Items on Reading Comprehension Section</b>	<b>36</b>

Of the 36 total items, 30 are scorable items reported on the ISR, and 6 are unscored items that may be used on future versions of the ISEE.

### Mathematics Achievement

Mathematics Achievement items conform to the traditional mathematics achievement items that call for the identification and solution of a problem requiring one or more steps in calculation. Based on the strands of the NCTM, the items require calculations ranging from simple addition and subtraction (Lower Level) to second-year algebra (Upper Level). The standards used for the Middle Level ISEE are NCTM's standards for grades 6–8 and may be found at [www.nctm.org](http://www.nctm.org). Item formats and rules for generating items are summarized below.

- Items measure knowledge of content area and academic skills.
- Items assess what mathematics the student has been taught and how much the student is able to do.
- Incorrect answer choices are based on process errors (e.g., miscalculations, using wrong operations, wrong formulas).
- Items have the following characteristics:
  - They are more concrete than abstract. They require application of standard mathematical rules in standard situations.
  - They require knowledge of terminology.
  - They require knowledge of procedures, as well as concepts.

The following table shows the skill areas and approximate number of questions testing those skill areas for the actual Middle Level Mathematics Achievement section.

### MATHEMATICS ACHIEVEMENT SECTION

Skill Areas	Number of Items
Whole Numbers	7–10
Decimals, Percents, Fractions	7–10
Algebraic Concepts	9–13
Geometry	4–6
Measurement	4–6
Data Analysis and Probability	5–9
<b>Total Items on Mathematics Achievement Section</b>	<b>47</b>

Of the 47 total items, 42 are scorable items reported on the ISR, and 5 are unscored items that may be used on future versions of the ISEE.

The Mathematics Achievement section on the Middle Level ISEE has a direct connection to what the student is learning or has learned in mathematics in school. While the mathematics achievement skills at the Lower and Middle levels are similar, the level of difficulty of the individual questions will be appropriate for grades 6 and 7 (Middle Level). As stated previously, since each level is given to students in more than one grade, it is possible that some of the questions may seem difficult because the student has not yet learned some of the concepts. This is particularly true of the Mathematics Achievement section. But *the student's* ISEE score is compared *only to students in the same grade who are also applying to independent schools*, students who are probably learning about the same things in school.

### **Essay**

The essay prompts on the ISEE were created to be consistent with the prompts on previous editions of the ISEE. All prompts are free of bias, global in scope, and representative of a wide variety of topics. The Middle Level prompts ask students to write an essay that is of interest and relevant to the experiences of students at this age. The essay will give further insight into what is important to the applicant.

## **Appendix B**

### **Answer Sheet**

Use the answer sheet and pre-lined pages in this appendix for the Practice Test. You may want to photocopy the answer sheet to make it more convenient to use during the Practice Test.



**2 QUANTITATIVE REASONING**

1 (A)(B)(C)(D)	15 (A)(B)(C)(D)	29 (A)(B)(C)(D)
2 (A)(B)(C)(D)	16 (A)(B)(C)(D)	30 (A)(B)(C)(D)
3 (A)(B)(C)(D)	17 (A)(B)(C)(D)	31 (A)(B)(C)(D)
4 (A)(B)(C)(D)	18 (A)(B)(C)(D)	32 (A)(B)(C)(D)
5 (A)(B)(C)(D)	19 (A)(B)(C)(D)	33 (A)(B)(C)(D)
6 (A)(B)(C)(D)	20 (A)(B)(C)(D)	34 (A)(B)(C)(D)
7 (A)(B)(C)(D)	21 (A)(B)(C)(D)	35 (A)(B)(C)(D)
8 (A)(B)(C)(D)	22 (A)(B)(C)(D)	36 (A)(B)(C)(D)
9 (A)(B)(C)(D)	23 (A)(B)(C)(D)	37 (A)(B)(C)(D)
10 (A)(B)(C)(D)	24 (A)(B)(C)(D)	38 (A)(B)(C)(D)
11 (A)(B)(C)(D)	25 (A)(B)(C)(D)	
12 (A)(B)(C)(D)	26 (A)(B)(C)(D)	
13 (A)(B)(C)(D)	27 (A)(B)(C)(D)	
14 (A)(B)(C)(D)	28 (A)(B)(C)(D)	

Middle/Upper Level Ends  
Lower Level Ends

**4 MATHEMATICS ACHIEVEMENT**

1 (A)(B)(C)(D)	18 (A)(B)(C)(D)	35 (A)(B)(C)(D)
2 (A)(B)(C)(D)	19 (A)(B)(C)(D)	36 (A)(B)(C)(D)
3 (A)(B)(C)(D)	20 (A)(B)(C)(D)	37 (A)(B)(C)(D)
4 (A)(B)(C)(D)	21 (A)(B)(C)(D)	38 (A)(B)(C)(D)
5 (A)(B)(C)(D)	22 (A)(B)(C)(D)	39 (A)(B)(C)(D)
6 (A)(B)(C)(D)	23 (A)(B)(C)(D)	40 (A)(B)(C)(D)
7 (A)(B)(C)(D)	24 (A)(B)(C)(D)	41 (A)(B)(C)(D)
8 (A)(B)(C)(D)	25 (A)(B)(C)(D)	42 (A)(B)(C)(D)
9 (A)(B)(C)(D)	26 (A)(B)(C)(D)	43 (A)(B)(C)(D)
10 (A)(B)(C)(D)	27 (A)(B)(C)(D)	44 (A)(B)(C)(D)
11 (A)(B)(C)(D)	28 (A)(B)(C)(D)	45 (A)(B)(C)(D)
12 (A)(B)(C)(D)	29 (A)(B)(C)(D)	46 (A)(B)(C)(D)
13 (A)(B)(C)(D)	30 (A)(B)(C)(D)	47 (A)(B)(C)(D)
14 (A)(B)(C)(D)	31 (A)(B)(C)(D)	
15 (A)(B)(C)(D)	32 (A)(B)(C)(D)	
16 (A)(B)(C)(D)	33 (A)(B)(C)(D)	
17 (A)(B)(C)(D)	34 (A)(B)(C)(D)	

Lower Level Ends  
Middle/Upper Level Ends

**3 READING COMPREHENSION**

1 (A)(B)(C)(D)	15 (A)(B)(C)(D)	29 (A)(B)(C)(D)
2 (A)(B)(C)(D)	16 (A)(B)(C)(D)	30 (A)(B)(C)(D)
3 (A)(B)(C)(D)	17 (A)(B)(C)(D)	31 (A)(B)(C)(D)
4 (A)(B)(C)(D)	18 (A)(B)(C)(D)	32 (A)(B)(C)(D)
5 (A)(B)(C)(D)	19 (A)(B)(C)(D)	33 (A)(B)(C)(D)
6 (A)(B)(C)(D)	20 (A)(B)(C)(D)	34 (A)(B)(C)(D)
7 (A)(B)(C)(D)	21 (A)(B)(C)(D)	35 (A)(B)(C)(D)
8 (A)(B)(C)(D)	22 (A)(B)(C)(D)	36 (A)(B)(C)(D)
9 (A)(B)(C)(D)	23 (A)(B)(C)(D)	
10 (A)(B)(C)(D)	24 (A)(B)(C)(D)	
11 (A)(B)(C)(D)	25 (A)(B)(C)(D)	
12 (A)(B)(C)(D)	26 (A)(B)(C)(D)	
13 (A)(B)(C)(D)	27 (A)(B)(C)(D)	
14 (A)(B)(C)(D)	28 (A)(B)(C)(D)	

Middle/Upper Level Ends  
Lower Level Ends



PAGE 2

**STUDENT NAME** \_\_\_\_\_ **GRADE APPLYING FOR** \_\_\_\_\_

Use a blue or black ballpoint pen to write the final draft of your essay on this sheet.

You must write your essay topic in this space.

Use specific details and examples in your response.

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