4.G.2. Classify two-dimensional figures

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Which geometric figure has no parallel lines?

   a.   c.

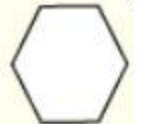   b.   d.

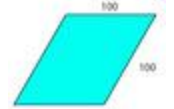2. Which figure is constructed with no parallel lines?

   a.   c.

   b.   d.

3. Which figure is constructed with perpendicular and parallel lines?

   a.   c.

   b.   d.

4.

Select the true statements about this group of geometric figures.

a. Each of these figures have at least two pairs of parallel sides.

c. Each of these figures have at least one right angle. They are constructed using at least one pair of perpendicular lines.

b. None of these geometric figures have right angles (90 degree angles). They are not constructed using perpendicular lines.

d. None of these figures have any angles that are less than 90 degrees.

5. Which triangle is a right triangle?

a.

c.

b.

d.

6. Which figure has two angles that are less than 90 degrees?

a.

c.

b.

d.

7. Which figure has more than two pairs of parallel sides?

a.

c.

b.

d.

Which statement about the trapezoid is true?

8.   a. The trapezoid has one pair of parallel sides.

c. The trapezoid has two pairs of parallel sides.

b. The trapezoid has 2 right angles (90 degree angles).

d. All of the trapezoid's angles are equal.

9. Which figure has four right angles (90 degree angles)?
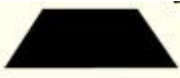
a.

c.

b.

d.

10.

Which figure has the same number of parallel sides as this parallelogram?
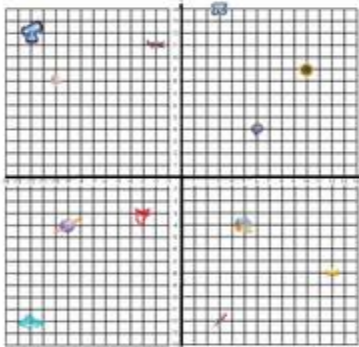
a.

c.

b.

d.

Answer 1: C

Two-dimensional figures can be described by identifying parallel and perpendicular lines used to construct the figures.

_____

_____ Parallel lines are lines that will never intersect because there is an equal distance between them along their entire length.

Perpendicular lines intersect at a 90 degree angle. The lines on this graph create a grid when they intersect at 90 degree angles. Notice the perpendicular lines at the center of the graph. They are printed in bold black and can be easily identified as perpendicular lines.

Parallel and perpendicular lines can be identified in geometric figures. Here are some examples:

 The right triangle has one 90 degree angle. No parallel lines are used in the construction of a triangle.

The square has four 90 degree angles. Opposite sides are parallel.

The trapezoid has no 90 degree angles. One pair of sides are parallel.

Answer 2: D
Answer 3: C
Answer 4: B
Answer 5: C
Answer 6: B
Answer 7: A
Answer 8: A
Answer 9: C
Answer 10: A