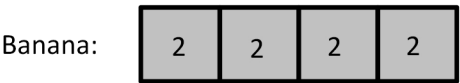Name _____   Date _____

1. Adi surveys third graders to find out their favorite fruits. The results are in the table below.

Favorite Fruits of Third Graders	
Fruit	**Number of Student Votes**
Banana	8
Apple	16
Strawberry	12
Peach	4

Draw units of 2 to complete the tape diagrams to show the total votes for each fruit. The first one has been done for you.

Banana: | 2 | 2 | 2 | 2 |

Apple:

Strawberry:

Peach:

2. Explain how you can create vertical tape diagrams to show this data.

3. Complete the vertical tape diagrams below using the data from Problem 1.

a.

2
2
2
2

Banana   Apple   Strawberry   Peach

b.

4
4

Banana   Apple   Strawberry   Peach

c. What is a good title for the vertical tape diagrams?

d. Compare the number of units used in the vertical tape diagrams in Problems 3(a) and 3(b). Why does the number of units change?

e. Write a multiplication number sentence to show the total number of votes for strawberry in the vertical tape diagram in Problem 3(a).

f. Write a multiplication number sentence to show the total number of votes for strawberry in the vertical tape diagram in Problem 3(b).

g. What changes in your multiplication number sentences in (e) and (f)? Why?

Answer Key

1. Answer provided; 8 units of 2 drawn; 6 units of 2 drawn; 2 units of 2 drawn

2. Answers will vary.

3. a. Answer provided; 8 units of 2 drawn; 6 units of 2 drawn; 2 units of 2 drawn

   b. Answer provided; 4 units of 4 drawn; 3 units of 4 drawn; 1 unit of 4 drawn

   c. Answers will vary.

   d. Answers will vary.

   e. $6 \times 2 = 12$

   f. $3 \times 4 = 12$

   g. Number and size of units; explanations will vary.