

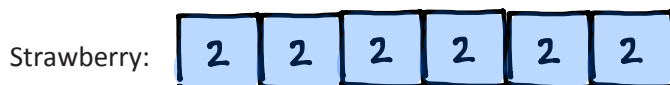
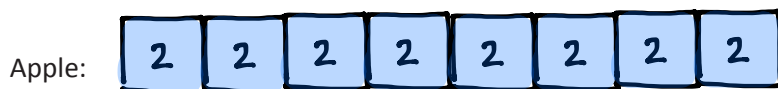
Name _____

Date _____

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

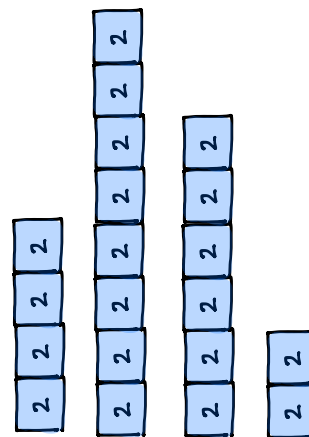
Favorite Fruits of Third Graders	
Fruit	Number of Student Votes
Banana	8
Apple	16
Strawberry	12
Peach	4

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.



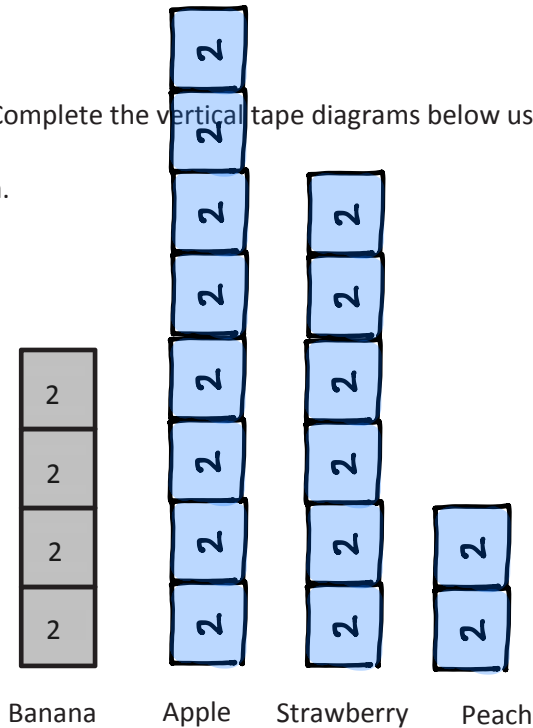
2. Explain how you can create vertical tape diagrams to show this data.

We would rotate each tape 90°.

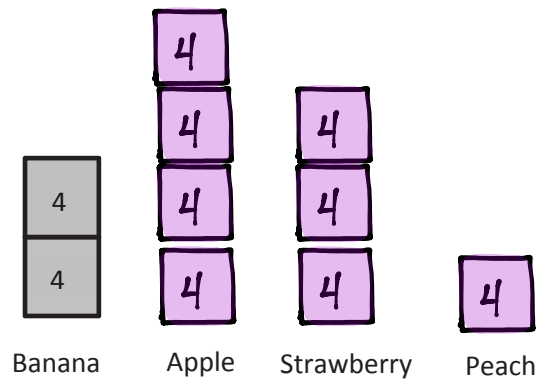


3. Complete the vertical tape diagrams below using the data from Problem 1.

a.



b.



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

Favorite Fruits of Third Graders

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?

There are fewer units in 3(b) because each unit is worth more.

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

$$6 \times 2 = 12$$

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

$$3 \times 4 = 12$$

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

The number of units and the value of each unit. The answer stays the same.