Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1 Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1

Name	Date	

1. Multiply or divide. Draw a model to explain your thinking.

a. 
$$\frac{1}{4} \times \frac{1}{3}$$
 b.  $\frac{3}{5} of \frac{1}{4}$ 

c. 
$$\frac{2}{5} \times \frac{4}{6}$$
 d.  $5 \div \frac{1}{3}$ 

e.  $5 \div \frac{1}{5}$ 

f.  $\frac{1}{5} \div 5$ 

Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1 Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1

2. Multiply or divide using any method.

a. 1.7 × 28	b. 1.7 × 0.28

c.  $16 \div 0.04$  d.  $1.6 \div 0.4$ 

e.  $12.8 \times \frac{2}{4}$  f.  $102.4 \div 3.6$ 

3. Fill in the chart by writing an equivalent expression.

a.	One-fifth the sum of one-half and one-third	
b.	Three and one-half times the sum of eight and twelve	
C.	Twenty-five divided by the difference between $1\frac{1}{2}$ and $\frac{2}{4}$	

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- 4. A castle has to be guarded 24 hours a day. Four knights are ordered to split each day's guard duty equally. How long will each knight spend on guard duty in one day?
  - a. Record your answer in hours.

b. Record your answer in hours and minutes.

c. Record your answer in minutes.

Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1 Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1

- 5. On the blank, write a division expression that matches the situation.
  - a. \_\_\_\_\_ Matthew and Jasmine share 6 yards of ribbon equally. How much ribbon will each get?
  - b. \_\_\_\_\_ It takes half of a yard of ribbon to make a bow. How many bows can be made with 6 yards of ribbon?
  - c. Draw a diagram for each problem and solve.

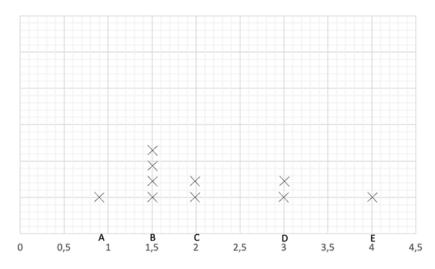
d. Could either of the problems also be solved by using  $\frac{1}{2} \times 6$ ? If so, which one(s)? Explain your thinking.

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- 6. Jay claims that multiplication always makes a number bigger. He gave the following examples:
  - If I take 5, and I multiply it by 3, I get 15, which is bigger than 5.
  - If I take  $\frac{1}{4}$ , and I multiply it by 2 (whole number), I get  $\frac{2}{4}$ , or  $\frac{1}{2}$ , which is bigger than  $\frac{1}{4}$ .

Jay's reasoning is incorrect. Give an example that proves he is wrong, and explain his mistake using pictures, words, or numbers.

7. Spencer collected honey from 10 different beehives and recorded the amount collected, in gallons, from each hive in the line plot shown:



- a. He wants to write the value of each point marked on the number line above (Points A–D) in terms of the largest possible whole number of gallons, quarts, and pints. Use the line plot above to fill in the blanks with the correct conversions. (The first one is done for you.)
  - A. <u>0 gal 3 qt 0 pt</u>
  - B. \_\_\_\_\_gal \_\_\_\_\_qt \_\_\_\_pt
  - C. \_\_\_\_\_gal \_\_\_\_\_qt \_\_\_\_pt

Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1 Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1

D. \_\_\_\_\_gal \_\_\_\_\_qt \_\_\_\_pT

Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1 Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1Standards: Grade 5: 5.NF.3, 5.NF.4, 5.NF.5.5, NF.6, 5.NF.7, 5.OA.1, 5.OA.2, 5.MD.1

b. Find the total amount of honey collected from the five hives that produced the most honey.

c. Spencer collected a total of 18 gallons of honey. If he distributes all of the honey equally between 8 jars, how much honey will be in each jar?

d. Spencer used  $\frac{2}{3}$  of a jar of honey for baking. How much honey did he use baking?

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e. Spencer's mom used  $\frac{3}{5}$  of a gallon of honey to bake 4 loaves of bread. If she used an equal amount of honey in each loaf, how much honey did she use for 1 loaf?

f. Spencer's mom stored some of the honey in a container that held  $\frac{4}{5}$  of a gallon. He used half of this amount to sweeten tea. How much honey, in cups, was used in the tea? Write an equation, and draw a tape diagram.

g. Spencer uses some of her honey to make lotion. If each bottle of lotion requires  $\frac{1}{3}$  gallon, and he uses a total of 3 gallons, how many bottles of lotion does he make?