

Module 4: Mid-Module Review

Name: Key # _____
Date: _____

Line Plots, Fractions as Division, Fraction of a Whole Number, & Word Problems

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

a. $\frac{1}{4} \times 8$

b. $\frac{1}{3} \times 6$

c. $\frac{2}{3} \times 9$

d. $\frac{1}{5} \times 20$

e. $\frac{1}{8}$ of 4 yards = _____ feet

$= \frac{1}{8} \times 4 \text{ yds}$

$= \frac{1}{8} \times 12 \text{ ft}$

$= \frac{1 \times 12}{8} = \frac{3}{2} = 1\frac{1}{2}$

f. $\frac{1}{4}$ of 6 feet = _____ inches

$\frac{6}{4} = 1\frac{1}{2}$

g. $(2 + \frac{1}{4}) \times 12$

$2 + \frac{1}{4} = \frac{9}{4}$

$\frac{9}{4} \times 12 = \frac{9 \times 12}{4} = \frac{108}{4} = 27$

h. $3\frac{1}{3} \times 11$

$3\frac{1}{3} \times 11 = (3 \times 11) + (\frac{1}{3} \times 11)$

$33 + \frac{11}{3} = 33 + 3 + \frac{2}{3} = 36\frac{2}{3}$

2. If the whole bar is 8 units long, what is the length of the shaded part of the bar? Write a multiplication equation for the diagram, and then solve.

$\frac{1}{6} \times 8 = \frac{8}{6} = 1\frac{2}{6} = 1\frac{1}{3}$

$1\frac{1}{3} \times 4 = 4 + \frac{4}{3} = 4 + 1\frac{1}{3} = 5\frac{1}{3}$

3. Circle the expression(s) that are equal to $\frac{2}{4} \times 8$. Explain why the others are *not* equal using words, pictures, or numbers.

a. $2 \times \frac{8}{4}$

c. ~~$2 \div (4 \times 8)$~~

b. $(2 \times 8) \div 4$

d. $2 \times (8 \div 4)$

will you divide by 4?
will you multiply 2 and 8?

4. Write the following as expressions.

- a. One-third the difference between $\frac{3}{4}$ and $\frac{1}{5}$.

$$\frac{1}{3} \times \left(\frac{3}{4} - \frac{1}{5} \right)$$

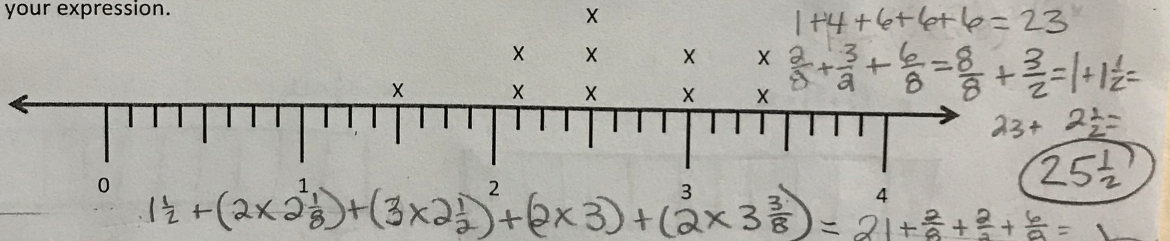
- b. One-fifth the sum of 8 and 2.

$$\frac{1}{5} \times (8 + 2)$$

- c. Seven times the quotient of 2 and 3.

$$\frac{2}{3} \times 7$$

5. Mrs. Little made coffee each day on her 10 day family vacation. The following line plot shows the amount of cups of coffee her family drank each day. Write an expression that includes multiplication to show how to find the total amount of coffee the family drank each day. Then, solve your expression.



* Use another sheet of paper to show your thinking.

6. Mrs. Little used the following recipe to make pancakes. She decided to make $\frac{3}{4}$ of the recipe.

- 8 cups bisquick
- 5 cups skim milk
- 4 eggs

$$\frac{3}{4} \times 8 = \frac{3 \times 8}{4} = 6 \text{ cups bisquick}$$

$$\frac{3}{4} \times 5 = \frac{15}{4} = 3 \frac{3}{4} \text{ cups milk}$$

$$\frac{3}{4} \times 4 = 3 \text{ eggs}$$

- a. How much of each ingredient will she need? Write an expression that includes multiplication. Solve by multiplying. *See above*

- b. How many fluid ounces of milk will she use? (You may use your measurement conversion chart)

$$3 \frac{3}{4} \times 1 \text{ cup} = 3 \frac{3}{4} \times 8 \text{ oz} = 24 + \frac{24}{4} = 24 + 6 = 30$$

- c. Mrs. Little made 21 pancakes. She gives $\frac{2}{3}$ of the pancakes to her children and gave the rest to her husband. How many pancakes did she give to her husband? Use any method to solve.

