# M4.L5 - Word Problems

## Fraction of a Set

$10 \times \frac{1}{2} = 5$ $10 \times \frac{1}{5} = 2$ $8 \times \frac{1}{2} = 4$ $8 \times \frac{1}{4} = 2$

$6 \times \frac{1}{3} = 2$ $30 \times \frac{1}{6} = 5$ $42 \times \frac{1}{7} = 6$ $42 \times \frac{1}{6} = 7$

$48 \times \frac{1}{8} = 6$ $54 \times \frac{1}{9} = 6$ $54 \times \frac{1}{6} = 9$

## Write Fractions as Mixed Numbers

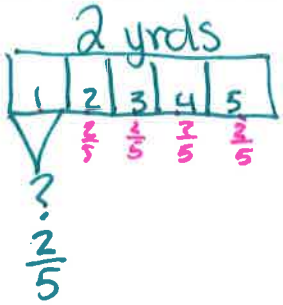
$\frac{13}{2} = 6\frac{1}{2}$ $\frac{11}{2} = 5\frac{1}{2}$ $\frac{17}{2} = 8\frac{1}{2}$ $\frac{44}{2} = 22$

$\frac{31}{10} = 3\frac{1}{10}$ $\frac{23}{10} = 2\frac{3}{10}$ $\frac{47}{10} = 4\frac{7}{10}$ $\frac{89}{10} = 8\frac{9}{10}$

$\frac{8}{3} = 2\frac{2}{3}$ $\frac{13}{3} = 4\frac{1}{3}$ $\frac{26}{3} = 8\frac{2}{3}$ $\frac{9}{4} = 2\frac{1}{4}$ $\frac{35}{4} = 8\frac{3}{4}$

Name _____ Date _____

1. A total of 2 yards of fabric is used to make 5 identical pillows. How much fabric is used for each pillow?




$2 \div 5 = \frac{2}{5}$

$5 \times \frac{2}{5}$

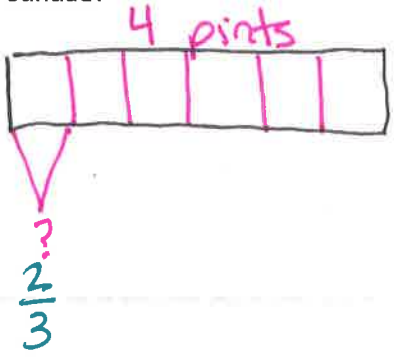
$= \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5}$

$= \frac{10}{5}$

$= 2$

Each pillow uses $\frac{2}{5}$ yards of fabric.

2. An ice cream shop uses 4 pints of ice cream to make 6 sundaes. How many pints of ice cream are used for each sundae?




$4 \div 6 = \frac{4}{6} \overset{\div 2}{=} \frac{2}{3}$

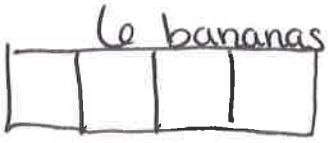
$6 \times \frac{2}{3}$

$= \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3}$

$= \frac{12}{3} = 4$

Each sundae uses $\frac{2}{3}$ pints of ice cream.

3. An ice cream shop uses 6 bananas to make 4 identical sundaes. How many bananas are used in each sundae? Use a tape diagram to show your work.




$6 \div 4 = \frac{6}{4}$

$1\frac{2}{4}$

$4 \overline{)6}$

$\frac{4}{2}$

$1\frac{2}{4} \overset{\div 2}{=} 1\frac{1}{2}$

$1\frac{1}{2} \times 4$

$1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2}$

$4 + \frac{4}{2}$

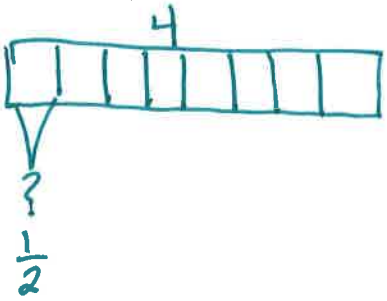
$4 + 2$

$= 6$

Each sundae uses _____ bananas.

4. Julian has to read 4 articles for school. He has 8 nights to read them. He decides to read the same number of articles each night.

   a. How many articles will he have to read per night?




$4 \div 8 = \frac{4}{8} \div 2 = \frac{1}{2}$

Julian reads $\frac{1}{2}$ article each night.

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

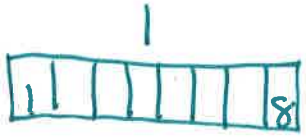
$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

$= \frac{8}{2}$

$= 4$

   b. What fraction of the reading assignment will he read each night?

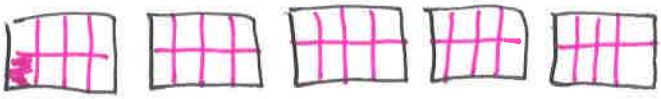
Julian reads $\frac{1}{8}$ of the reading assignment each night




$1 \div 8 = \frac{1}{8}$

5. 40 students shared 5 pizzas equally. How much pizza will each student receive? What fraction of the pizza did each student receive?

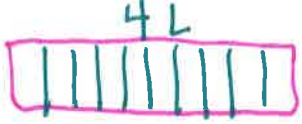

$5 \div 40 = \frac{5}{40} = \frac{1}{8}$



Each student receives $\frac{1}{8}$ of the pizza.

6. Lillian had 2 two-liter bottles of soda, which she distributed equally between 10 glasses.

   a. How much soda was in each glass? Express your answer as a fraction of a liter.




$4 \div 10 = \frac{4}{10}$

Each glass has $\frac{4}{10}$ liter

b. Express your answer as a decimal number of liters.

0.4 L

c. Express your answer as a whole number of milliliters.

0.4 L = ____ mL

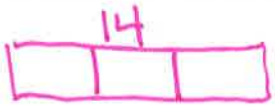
Expand = 0.4 x (1 Liter)

Convert = 0.4 x (1000 mL)

Answer = 400 mL

7. The Calef family likes to paddle along the Susquehanna River.

a. They paddled the same distance each day over the course of 3 days, traveling a total of 14 miles. How many miles did they travel each day? Show your thinking in a tape diagram.




$14 \div 3 =$

$\frac{14}{3}$ $3\overline{)14}$ $4\frac{2}{3}$, remainder 2

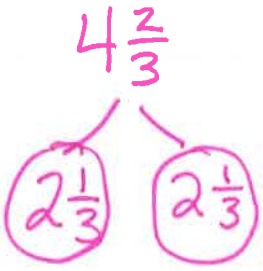
The family traveled $4\frac{2}{3}$ mi each day

$4\frac{2}{3} + 4\frac{2}{3} + 4\frac{2}{3}$

$12 + \frac{6}{3}$

$12 + 2 = 14$

b. If the Calefs went half their daily distance each day but extended their trip to twice as many days, how far would they travel?




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

$2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3}$

$= 12 + \frac{6}{3}$

$= 12 + 2$

$= 14$