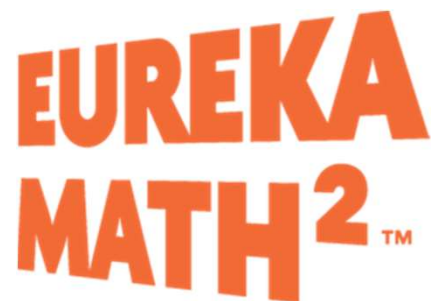




Module 3 - Lesson 21:

Solve multi-step word problems involving fractions.

CCSS Standard – 5.NF.B.6 / 5.NF.B.7.c

FLUENCY (10-min)

Whiteboard Exchange: Convert Customary Weight Units



16 ounces is equal to how many pounds?

$$16 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$$

$$1 \div 16?$$

$$1 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$$

$$8 \div 16?$$

$$8 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$$

$$10 \div 16?$$

$$10 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$$

$$19 \div 16?$$

$$19 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$$

FLUENCY (10-min)

Whiteboard Exchange: Subtract a Mixed Number from a Whole Number



Write and complete the equation.
Show your method.

$$2 - 1\frac{1}{2} = \underline{\hspace{2cm}}$$

$$2 - 1\frac{4}{6} = \underline{\hspace{2cm}}$$

$$3 - 1\frac{3}{4} = \underline{\hspace{2cm}}$$

FLUENCY (10-min)

Whiteboard Exchange: Subtract a Mixed Number from a Whole Number



Write and complete the equation.
Show your method.

$$5 - 2\frac{2}{7} = \underline{\hspace{2cm}}$$

$$7 - 4\frac{4}{12} = \underline{\hspace{2cm}}$$

LAUNCH (5-min)

Construct a tape diagram to show how a given expression matches a real-world situation

LEARN book page 191.

Construct a tape diagram to match the story.

1. Sana has 4 pounds of green beans. She gives 2 pounds of them to her friend. Sana's family eats $\frac{3}{4}$ of the remaining green beans. How many pounds of green beans does Sana have left?

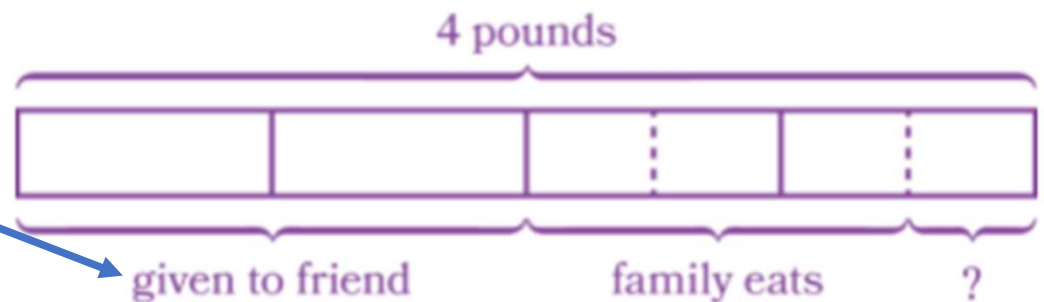
Someone wrote this expression to match the story. Work with a partner to construct a tape diagram to show that the expression matches the story.

$$\frac{1}{4} \times (4 - 2)$$

The number $\frac{1}{4}$ is not in the story. So why does the expression show to multiply by $\frac{1}{4}$?

$\frac{3}{4}$ are eaten, that means $\frac{1}{4}$ are left.

Where do you see the $(4 - 2)$ in the tape diagram?



LEARN (35-min)

Solve a Multi-step Word Problem

LEARN book page 191.

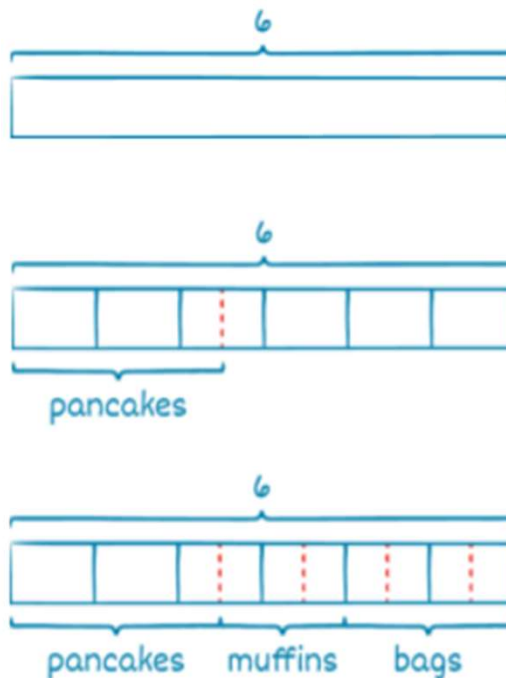
Use the Read–Draw–Write process to solve each problem.

2. Tyler has 6 cups of blueberries. He uses $2\frac{1}{2}$ cups of blueberries for pancakes. He uses $\frac{3}{7}$ of the remaining blueberries for muffins. Tyler puts the rest of the blueberries into bags. He puts $\frac{1}{4}$ cup of blueberries into each bag. How many bags of blueberries can Tyler make?

Can we draw something? If so, what?

Let's partition so we can see each cup of blueberries. Then partition 1 part in HALF to label $2\frac{1}{2}$.

Let's label all the other information.



Look at our tape diagram, what conclusions can we make?

*2 $\frac{1}{2}$ cups are used pancakes.
1 $\frac{1}{2}$ cups are used for muffins.
2 cups are put into bags.*

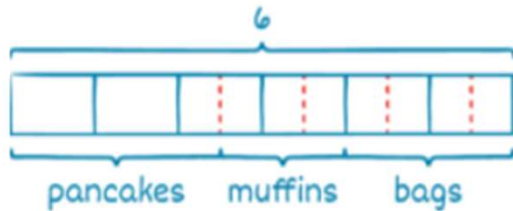
What does the problem ask us to find? Does our tape diagram show that?

No! Our tape diagram shows us how many cups go into each bag, but it does not show us how many bags he could make. We can draw a separate tape diagram.

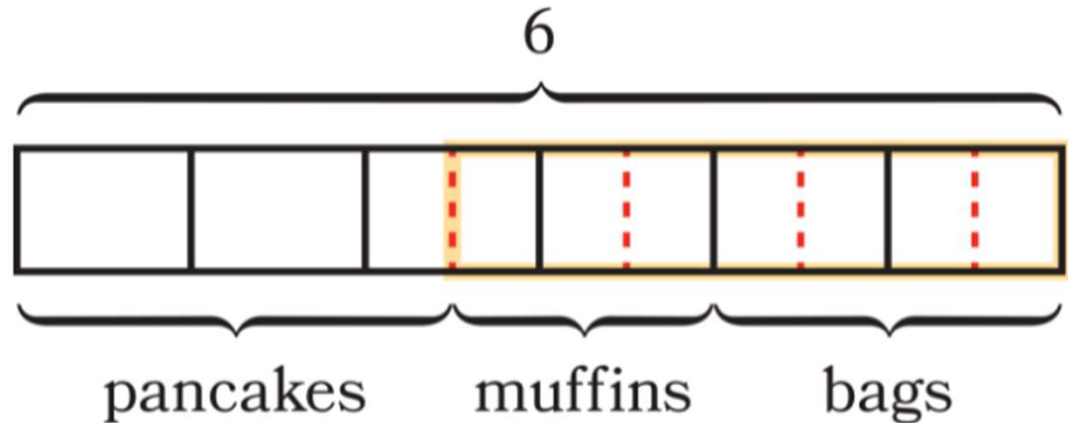
LEARN (35-min)**Solve a Multi-step Word Problem****LEARN** book page 191.

Use the Read–Draw–Write process to solve each problem.

2. Tyler has 6 cups of blueberries. He uses $2\frac{1}{2}$ cups of blueberries for pancakes. He uses $\frac{3}{7}$ of the remaining blueberries for muffins. Tyler puts the rest of the blueberries into bags. He puts $\frac{1}{4}$ cup of blueberries into each bag. How many bags of blueberries can Tyler make?



No! Our tape diagram shows us how many cups go into each bag, but it does not show us how many bags he could make. We can draw a separate tape diagram.



$$2 \text{ cups} \div \frac{1}{4} \text{ cup per bag}$$

$$2 \text{ cups} \times 4$$

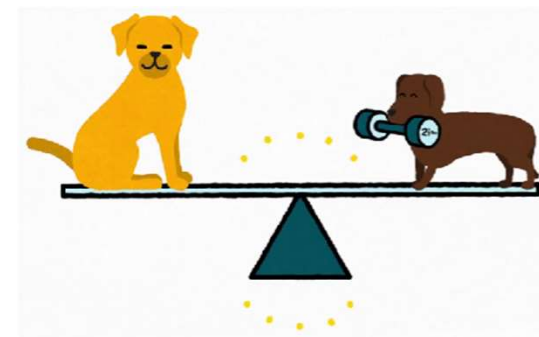
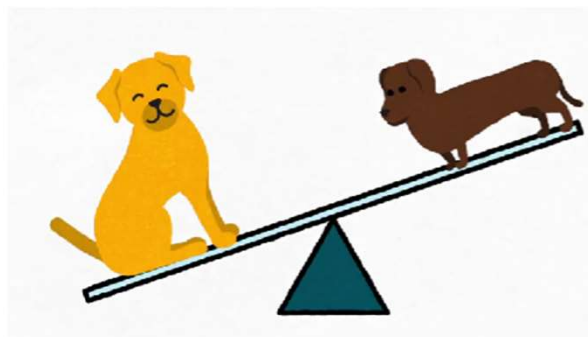
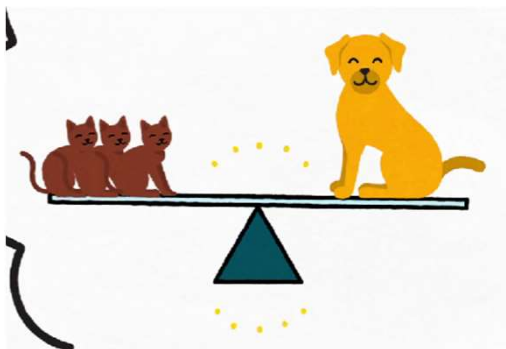
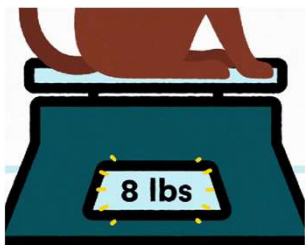
8 bags

LEARN (35-min)

Solve a Multi-step Word Problem

LEARN book page 192.

3. Lacy's cat weighs 8 pounds. Her cat weighs $\frac{1}{3}$ as much as her dog. Noah's dog weighs $2\frac{1}{2}$ pounds less than Lacy's dog. How much does Noah's dog weigh?



**LACY'S AND
NOAH'S PETS**



Cat = 8 pounds

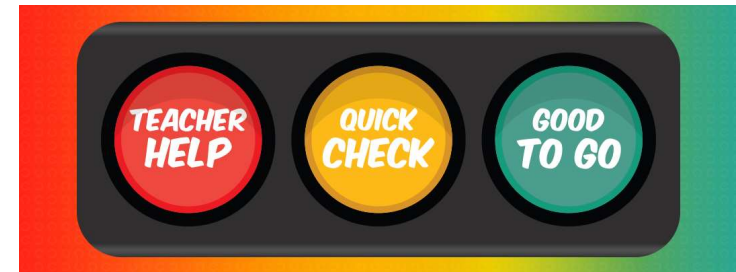
Lacy's dog (yellow) = 3×8 or 24 pounds

$24 - 2\frac{1}{2}$

Noah's dog (brown) = $21\frac{1}{2}$ pounds

LAND (10-min)

Exit Ticket



Name

Date



21

Use the Read–Draw–Write process to solve the problem.

Shen bought 20 pounds of ground beef. He used $\frac{1}{4}$ of the beef to make tacos. He used $\frac{2}{3}$ of the remaining beef to make $\frac{1}{4}$ -pound burgers. How many burgers did he make?

Exit Ticket – PAGE 195

Small Group Time:

Problem Set Pages 193 -194

Homework:

Page 135 APPLY BOOK