

Lesson 4:

Solve word problems involving division and fractions.

CCSS Standard – 5.NF / 5.NF.B.3

FLUENCY (10-min)

Choral Response: Convert Metric Units

1 liter is equal to how many centiliters?

$$1 \text{ L} = \underline{\quad} \text{ cL}$$

$$2 \text{ L} = \underline{\quad} \text{ cL}$$

$$2 \text{ L } 538 \text{ cL} = \underline{\quad} \text{ cL}$$

$$1 \text{ m} = \underline{\quad} \text{ cm}$$

$$3 \text{ m} = \underline{\quad} \text{ cm}$$

$$3 \text{ m } 470 \text{ cm} = \underline{\quad} \text{ cm}$$

$$1 \text{ g} = \underline{\quad} \text{ cg}$$

$$4 \text{ g} = \underline{\quad} \text{ cg}$$

$$4 \text{ g } 61 \text{ cg} = \underline{\quad} \text{ cg}$$

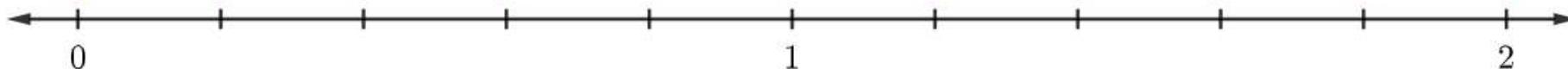
FLUENCY (10-min)

Counting on the Number Line

What **FRACTIONAL UNIT** does the number line show? **Raise your hand when you know.**

Fifths

Use the number line to count forward by fifths.



Now count forward by fifths again. This time rename the fractions as **whole numbers** when possible.



Now count forward by fifths again. This time rename the fractions as **whole numbers and mixed numbers** when possible.

Notice: Whole numbers and fractional units.

FLUENCY (10-min)

Whiteboard Exchange: Subtract Mixed Numbers



Write and complete the equation.

When possible, rewrite the difference as a whole number.

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

$$3\frac{4}{5} - 1\frac{2}{5} = \underline{\hspace{2cm}}$$

$$4\frac{4}{6} - 1\frac{3}{6} = \underline{\hspace{2cm}}$$

$$5\frac{7}{8} - 2\frac{2}{8} = \underline{\hspace{2cm}}$$

$$5\frac{9}{10} - 3\frac{4}{10} = \underline{\hspace{2cm}}$$

$$6\frac{11}{12} - 2\frac{5}{12} = \underline{\hspace{2cm}}$$

LAUNCH (5-min)

Does the tape diagram correctly represent a real-world problem?

Toby runs 7 miles in 5 days.

He runs the same number of miles each day.

How many miles does Toby run each day?

Leo's is correct. He set up his tape diagram to represent the **total number of miles**. The 5 equal parts represent the 5 days.

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It is important to read word problems carefully and to identify which quantity represents the **dividend** and which quantity represents the **divisor**.

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How did Leo set up his tape diagram?

How did Tara set up her tape diagram?

Tara is incorrect. She divided the **number of days**. Days is the divisor not the dividend.

Leo's Way:

$7 \div 5 = \frac{7}{5}$
Toby runs $\frac{7}{5}$ miles each day.

Tara's Way:

$5 \div 7 = \frac{5}{7}$
Toby runs $\frac{5}{7}$ miles each day.

LEARN (35-min)

Model and Solve Division Problems

LEARN BOOK – PAGE 31

Mrs. Chan uses 13 yards of fabric to make 4 identical quilts. How many yards of fabric does Mrs. Chan use for each quilt?

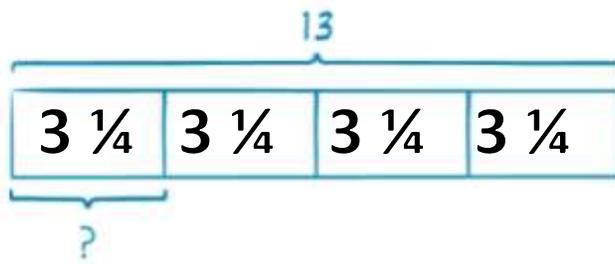
What do we know from reading the word problem?

Mrs. Chan uses 13 total yards of fabric.
She make 4 identical quilts.

What does the question ask us to find?

How many yards of fabric are used for EACH quilt.

What can we draw to represent that information?



What do we need to do to solve this?

$$13 \div 4 = 13/4 \text{ or } 3\frac{1}{4}$$

LEARN (35-min)

Model and Solve Division Problems

LEARN BOOK – PAGE 31

40 students share 5 pizzas equally. How much pizza does each student get?

What do we know from reading the word problem?

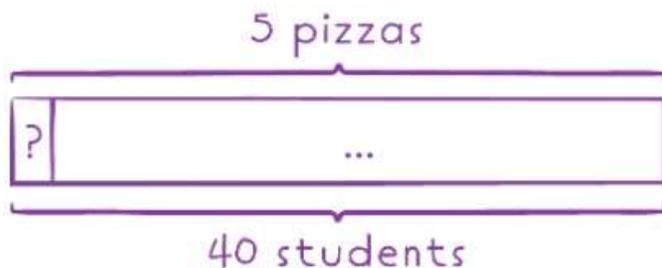
40 students share 5 pizzas.

Each student gets an equal amount.

What does the question ask us to find?

How much pizza does EACH student get.

What can we draw to represent that information?



What do we need to do to solve this?

$$5 \div 40 = 5/40 \text{ or } 1/8 \text{ of a pizza}$$

LEARN (35-min)

Model and Solve Division Problems

LEARN BOOK – PAGE 32

Mr. Evans cuts 17 feet of wire into 6 equal pieces. What is the length of each piece of wire?

What do we know from reading the word problem?

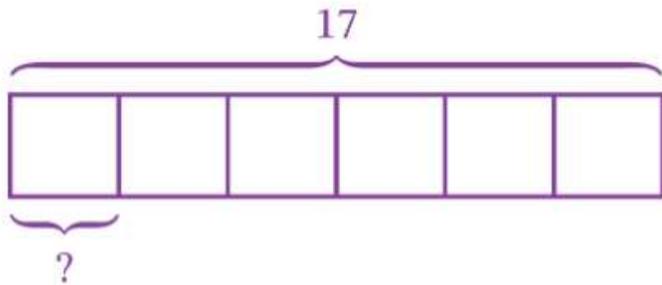
Mr. Evan has 17 feet of wire.

He cuts the wire into 6 EQUAL pieces.

What does the question ask us to find?

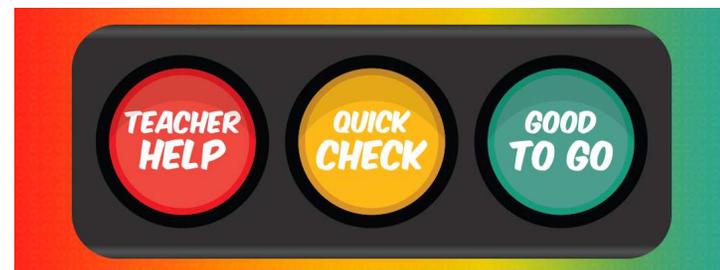
What is the length of EACH piece?

What can we draw to represent that information?



What do we need to do to solve this?

$$17 \div 6 = 17/6 \text{ or } 2 \frac{5}{6} \text{ feet}$$



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

1. Lacy uses 5 pounds of clay to make 6 identical vases. How many pounds of clay does she use for each vase?

Lacy uses _____ pounds of clay for each vase.

2. Yuna uses 23 inches of string to make 3 identical bracelets. How many inches of string does she use to make each bracelet?

Exit Ticket – PAGE 37

Small Group Time:
Problem Set Pages 33 - 34

Homework:
Page 27 APPLY BOOK