Name _____

Repeated Subtraction with Fractions

Essential Question How can you use repeated subtraction to solve problems involving division with fractions?

UNLOCK the Problem REAL WORLD

Mr. Jones is making snacks for his family. He has 3 cups of almonds and is dividing them into $\frac{1}{2}$-cup portions. How many portions can he make?

You have used repeated subtraction to divide whole numbers. Now, you will use repeated subtraction to solve a problem involving division by a fraction.

- What do you need to find?

_____

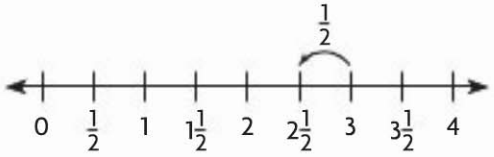
_____

- What other operation can you use instead of repeated subtraction to solve the problem?

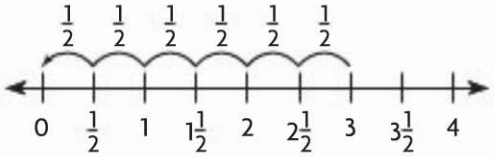
_____

Use repeated subtraction to divide 3 by $\frac{1}{2}$.

STEP 1 Start at 3 and count back $\frac{1}{2}$.



STEP 2 Subtract by $\frac{1}{2}$ until you reach 0 or get as close to it as possible.



Math Talk **Explain** why you count the number of groups of $\frac{1}{2}$.

STEP 3 Find the number of times you counted back by $\frac{1}{2}$.

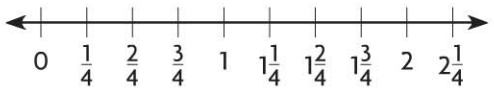
You counted _____ groups of $\frac{1}{2}$ to reach 0.

So, Mr. Jones can make _____ half-cup portions of almonds.

© Houghton Mifflin Harcourt Publishing Company

Share and Show

1. Use repeated subtraction and the number line to find $2 \div \frac{1}{4}$.



Start subtracting at _____.

Count back by groups of _____.

How many groups did you count to reach 0? _____

Use repeated subtraction to divide.

2. $2 \div \frac{1}{3}$

_____

3. $5 \div \frac{1}{2}$

_____

4. $1 \div \frac{1}{8}$

_____

On Your Own

Use repeated subtraction to divide.

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

_____

6. $2 \div \frac{1}{2}$

_____

7. $4 \div \frac{1}{3}$

_____

8. $2 \div \frac{1}{5}$

_____

9. $7 \div \frac{1}{2}$

_____

10. $3 \div \frac{1}{4}$

_____

Problem Solving

11. You are putting raisins into snack bags. You have 3 cups of raisins. You want to put $\frac{1}{3}$ cup of raisins in each bag. How many bags can you make?

_____

12. Margaret is cutting straws that are 4 inches long into $\frac{1}{2}$-inch pieces. She has two straws. She needs twenty $\frac{1}{2}$-inch pieces. Does she have enough to cut 20 pieces? **Explain.**

_____

_____

© Houghton Mifflin Harcourt Publishing Company