

Slide 1:

In this tutorial, we'll use number lines to divide fractions and whole numbers.

$$3 \div \frac{1}{4} \quad \frac{1}{4} \div 3$$

We'll also compare how you... *think about* division involving fractions and whole numbers.

Slide 2:

Before we begin solving our division problem involving a fraction, let's recall...

$$12 \div 4$$

How do you *think about* division involving whole numbers?

How do you *see* division involving whole numbers?

Slide 5:

How would you show the solution to this problem using a number line?

$$12 \div 4$$

How does a number line help explain the meaning of this division problem?

Slide 7:

How would **you** use the following words when describing your number line solution to the division problem?

Dividend

Quotient

Divisor

Slide 9:

Division and multiplication are inverse operations.

How would **you** explain the meaning of this statement?

How could understanding *inverse operations* help you verify your solution to a division problem?

Slide 11:

Think about your number line solution for $12 \div 4$...

Could you use the same thinking when the divisor is a fraction?

How would **you** explain the meaning of $12 \div \frac{1}{2}$?

Slide 13:

How would **you** demonstrate your number line solution for this division problem?

$$12 \div \frac{1}{2}$$

How would **you** explain your number line solution for this division problem?

Slide 17:

If the division problem $12 \div \frac{1}{2}$ means... *How many halves can be made from 12?*

How would **you** explain the division problem $\frac{1}{2} \div 12$?

Slide 19:

How would **you** demonstrate your number line solution for the division problem... $\frac{1}{2} \div 12$?

Slide 23:

Let's summarize what we know about division problems involving fractions and whole numbers...

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

How would **you** demonstrate your number line solution for this problem?

How would **you** explain your number line solution for this problem?

Slide 25:

How could you use multiplication to verify the solution to your division problem?

$$3 \div \frac{1}{4} = 12$$

Slide 27:

How does our problem change when we write the fraction first?

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

Can you use the words *dividend*, *divisor* and *quotient* to explain this division problem?

Slide 29:

How will **you** model the solution to this division problem using a number line?

How will **you** explain each step as you work through the solution?

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

Slide 33:

How could you use the previous solution to determine the solution to a new problem?

Can you describe the adjustment you need to make to model this new problem?

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

- I can explain a division problem using the words... *dividend, divisor and quotient*
- I can verify my solution to a division problem using the inverse operation
- I can model the solution to a division problem using a number line
- I can divide a whole number by a fraction using a number line
- I can divide a fraction by a whole number using a number line