

September 21, 2011

Warm-Up:

Multiply.

1. $-10 \cdot 5$ -50

2. $-5 \cdot (-6)$ 30

3. $8 \cdot (-9)$ -72

4. $-15 \cdot 7$ -105

5. $-22 \cdot (-8)$ 176

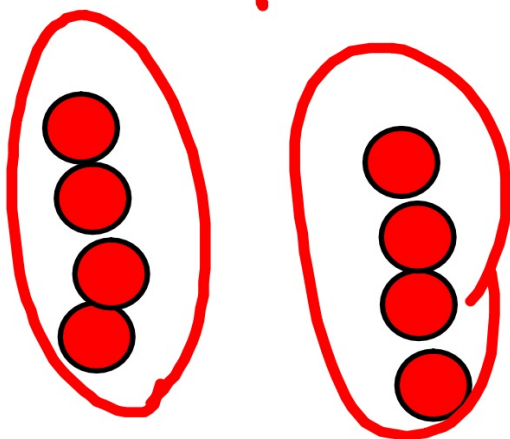
6. $32 \cdot (-4)$ -128

9/21 - Dividing Integers

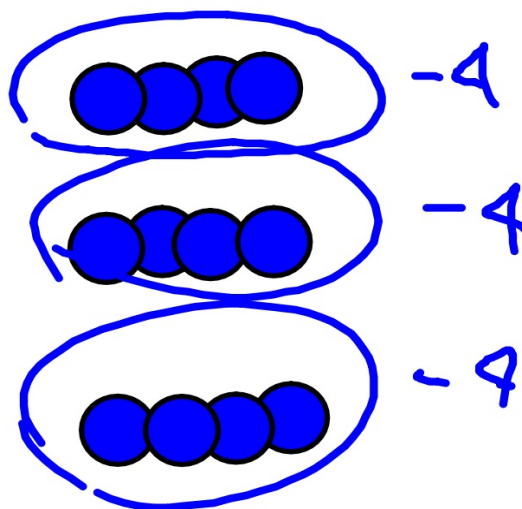
Use integers counters to show:

$$8 \div 2 = 4$$

groups of



$$-12 \div 3 = -4$$

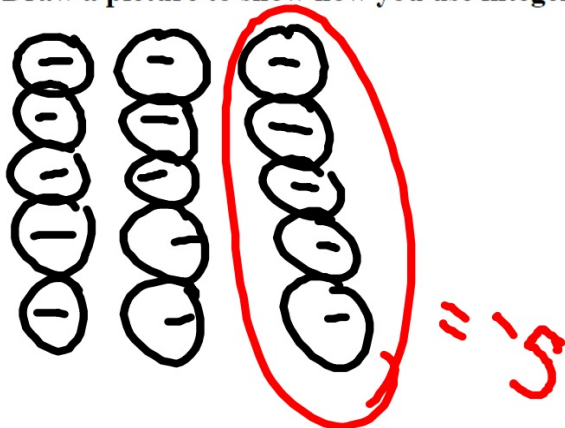


Get out your RED book - turn to page 19.

Do example #1.

1 EXAMPLE: Dividing Integers with Different Signs

Draw a picture to show how you use integer counters to find $-15 \div 3$.



= -5

Division and Multiplication are inverse operations

so you can rewrite divide equations as multiply equations.

$$8 \div 2 = 4$$

$$2 \cdot 4 = 8$$

$$4 \cdot 2 = 8$$

$$-12 \div 3 = -4$$

$$3 \cdot (-4) = -12$$

$$(-4) \cdot 3 = -12$$

In the RED book...

Do #2,3 and 4.

2 ACTIVITY: Rewriting a Product as a Quotient

Work with a partner. Rewrite the product $3 \cdot 4 = 12$ as a quotient in two different ways.

First Way

12 is equal to 3 groups of 4.

$$12 \div 3 = \underline{4}$$

Second Way

12 is equal to 4 groups of 3.

$$12 \div 4 = \underline{3}$$

3 EXAMPLE: Dividing Integers with Different Signs

Rewrite the product $-3 \cdot (-4) = 12$ as a quotient in two different ways.

What can you conclude?

First Way

$$12 \div (-3) = (-4)$$

Second Way

$$12 \div (-4) = (-3)$$

Look at the signs - what are the rules for dividing integers?

(Discuss with your partner)

$$+ \div + = +$$

$$+ \div - = -$$

$$- \div + = -$$

$$- \div - = +$$

Joker
Rules
work!



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Work with a partner. Complete the table.

	Exercise	Type of Quotient	Quotient	Quotient: Positive, Negative, or Zero
1	5. $-15 \div 3$	diff	-5	—
2	6. $12 \div 4$	same	3	+
3	7. $12 \div (-3)$	diff	-4	—
4	8. $-12 \div (-4)$	same	3	+

$$0 \div 2 = 0$$

$$0 \div (-2) = 0$$

Homework:

Worksheet: Pizza22
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due Friday