

# September 23, 2014

5<sup>th</sup>  
6<sup>th</sup>

## Starter

4,5 → 2    2,3 → 1    0,1 → 0

Compute each showing all of your work.

$$\begin{aligned} 1) \quad 2^3 \\ &= 2 \cdot 2 \cdot 2 \\ &= 8 \end{aligned}$$

$$\begin{aligned} 2) \quad -4^2 \\ &= -4 \cdot 4 \\ &= -16 \end{aligned}$$

$$\begin{aligned} 3) \quad (-3)^4 \\ &= (-3)(-3)(-3)(-3) \\ &= 9 \cdot 9 \\ &= 81 \end{aligned}$$

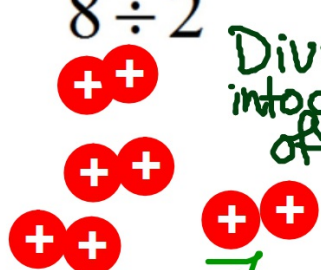
$$\begin{aligned} 4) \quad -3 \cdot 2^3 \\ &= -3 \cdot \underbrace{2 \cdot 2 \cdot 2} \\ &= -3 \cdot 8 \\ &= -24 \end{aligned}$$

$$\begin{aligned} 5) \quad |-4 \cdot 3| \cdot (-2) \\ &= |-12| \cdot (-2) \\ &= 12 \cdot (-2) \\ &= -24 \end{aligned}$$



## 9/23 Division with Integers

Use integer counters to show:

$8 \div 2$

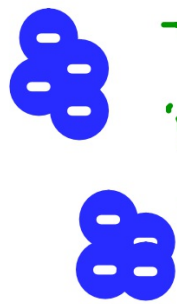


Divide 8 into groups of 2



The answer is how many groups there are.

$-12 \div 3$



Divide 12 into 3 groups

The answer is how many are in each group.

## Division and Multiplication are inverse operations

*so you can rewrite divide equations as multiply equations.*

$$8 \div 2 = 4$$

$$4 \cdot 2 = 8$$

or

$$2 \cdot 4 = 8$$

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

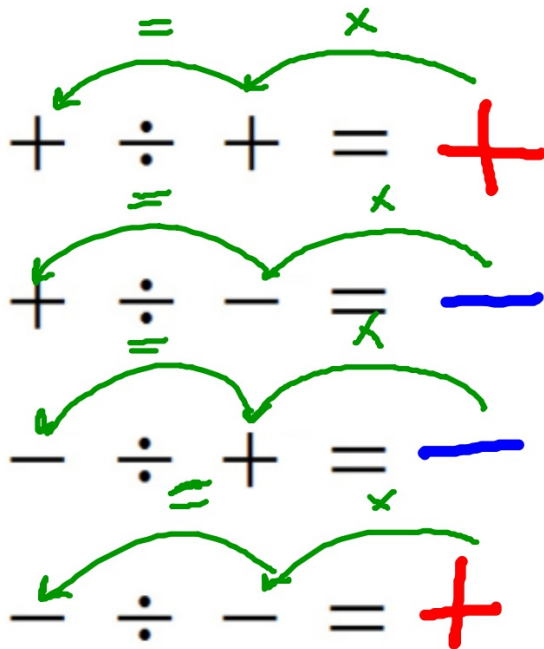
$$3 \cdot -4 = -12$$

or

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

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

(Discuss with your partner)



Batman  
Rules  
Works

## ● On Your Own

Divide.

1.  $14 \div 2 = 7$       2.  $-32 \div (-4) = 8$       3.  $-40 \div (-8) = 5$   
4.  $0 \div (-6) = 0$       5.  $\frac{-49}{7} = -7$       6.  $\frac{21}{-3} = -7$

$$-6 \div 0 = \square$$

impossible  
so you  
write:

$\emptyset$  which means "no solution"

Now some harder ones. Remember to use the Order of Operations!!

$$\begin{aligned} & -4 \cdot \frac{18}{-3} \\ & = -4 \cdot -6 \\ & = 24 \end{aligned}$$

$$\begin{aligned} & \left(\frac{6}{-2}\right)^2 \\ & = (-3)^2 \\ & = -3 \cdot -3 \\ & = 9 \end{aligned}$$

$$\begin{aligned} & -5 \cdot \left(\frac{10}{-5}\right)^3 \\ &= -5 \cdot (-2)^3 \\ &= -5 \cdot -2 \cdot -2 \cdot -2 \\ &= -5 \cdot -8 \\ &= 40 \end{aligned}$$

$$\begin{aligned} & -4 \cdot \frac{3 \cdot -8}{6 \cdot -2} \\ &= -4 \cdot \frac{-24}{-12} \\ &= -4 \cdot 2 \\ &= -8 \end{aligned}$$

# Homework

White WST

**Due** Thursday