

September 23, 2014 ^{1st} _{2nd} Starter

Using the prices below, find a way to buy exactly 100 animals with exactly \$100. You must buy at least one of *each* animal.

Cows: \$10 each
Pigs: \$3 each
Chickens: \$.50 each



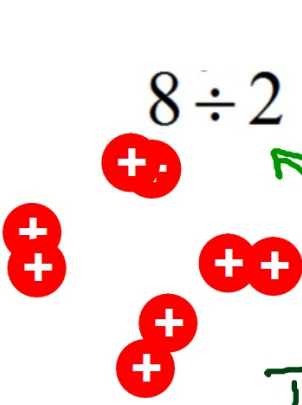
$$\begin{aligned} \textcircled{R} \quad & -2v + 2h - 8s \\ & = -2(9) + 2(7) - 8(-6) \\ & = \underline{-18 + 14} + 48 \\ & = -4 + 48 \end{aligned}$$

$$\begin{aligned} \textcircled{U} \quad & 7q - 2d + 3 \\ & = 7(-7) - 2(1) + 3 \\ & = \underline{-49 - 2} + 3 \\ & = -51 + 3 \\ & = -48 \end{aligned}$$

9/23 Division with Integers

Use integer counters to show:

$8 \div 2$




divide into groups with 2 in each group

The answer is how many groups there are.



2 methods to explain

$$-12 \div 3$$



Divide into 3 equal groups

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

$$2 \cdot 4 = 8$$

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

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

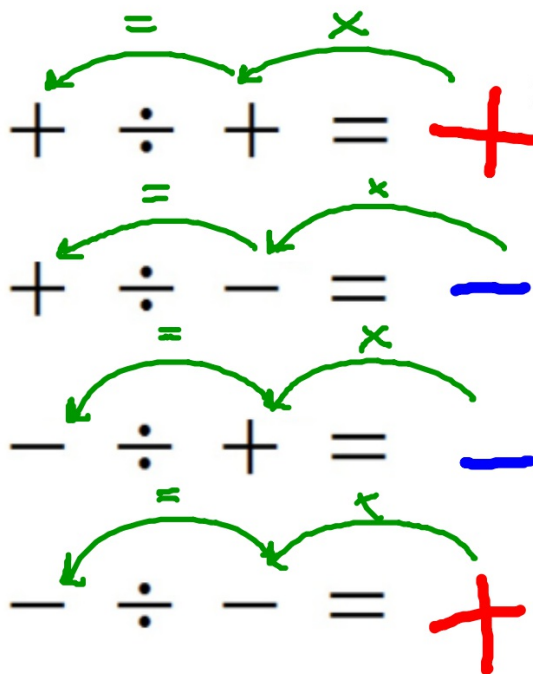
or

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

Mult.
&
divide
Check
each other

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

(Discuss with your partner)



Batman
rules
work!

● 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. $\frac{21}{-3} = -7$

$-6 \div 0 =$ nothing
so the
answer
is \emptyset

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

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

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

$$-5 \cdot \left(\frac{10}{-5}\right)^3$$

$$= -5 \cdot \underbrace{(-2)^3}$$

$$= -5 \cdot -8$$

$$= 40$$

$$-4 \cdot \frac{3 \cdot -8}{6 \cdot -2}$$

$$= -4 \cdot \frac{-24}{-12}$$

$$= -4 \cdot 2$$

$$= -8$$

What does *mean* mean? "Average"

① Add all the numbers

② Divide by how many numbers there are



Find the mean of each set of integers.

-16, -27, 21, -19, 14, -3

$$\begin{array}{r} 21 \\ + 14 \\ \hline 35 \end{array} \quad \begin{array}{r} -16 \\ -27 \\ -19 \\ -3 \\ \hline -65 \end{array}$$

$35 + (-65) = -30$

$-30 \div 6 = -5$

5, -7, 12, -10, 15

$$\begin{array}{r} 5 \\ -12 \\ +15 \\ \hline 32 \end{array} \quad \begin{array}{r} -7 \\ -10 \\ \hline -17 \end{array}$$

$32 + (-17) = 15$

$15 \div 5 = 3$

Homework

Green WS 8

Due Thursday