

NOVEMBER 20, 2014 ^{1ST} ^{2ND}

STARTER

A boy's camp has 6 different colored cabins. One time there were 48 boys staying at the camp. Use the following information to tell how many boys were in each cabin.

The smallest cabin had 5 boys.

The yellow and green cabins are the only ones with the same number of boys.

The orange cabin is the largest and had 10 boys.

The 13 youngest boys are in the red and blue cabins with the least number of boys.

The purple cabin has 2 more boys than the blue cabin.



IRONCLAD

$$\textcircled{16} \quad -1.4n + 0.5(n - 0.5)$$

$$= \underline{-1.4n} + \underline{0.5n} - 0.25 \frac{0.5}{0.5}$$
$$= -0.9n - 0.25$$

$$\begin{array}{r} -1.4 \\ +0.5 \\ \hline -0.9 \end{array}$$

$$\textcircled{2} \quad -3 + 4(5 + 5a)$$

$$= -3 + 20a + 20$$

$$= 20a + 17$$

$$\textcircled{6} \quad x + -4(1 + x)$$

$$= 1x - 4x - 4$$

$$= -3x - 4$$

11/20 - Factoring Out Common Factors

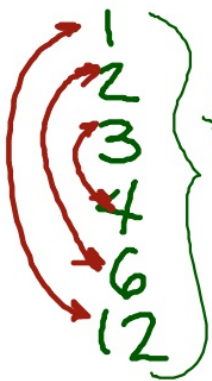
What are **FACTORS**?

#'s that are in multiplication problems

#'s you multiply together

Name all the factors of the given numbers:

12



Numbers that times by another number to = 12

30



Numbers that divide into 30 evenly.

48



What are **Common Factors**

When get the factors of two numbers, the ones that are the same are common factors.

Find the common factors of the given number pairs:

12, 18

1	1
2	2
3	3
4	6
6	9
12	18

1, 2, 3, 6

Find all factors for both then see which ones are common.

24, 40

1	24
2	12
3	8
4	6

Check to see which ones go into 40 now.

1, 2, 4, 8

30, 45

1	30
2	15
3	10
5	6

1, 15, 3, 5

"Factor out the common factor" assumes you use the LARGEST one that goes into both numbers.

GCF!

Find the Greatest Common Factor (GCF) for each set of numbers:

32, 24

8

18, 27

9

48, 36

12

Rewrite each by factoring out the GCF.

$$3b + 9 \\ = 3(b + 3)$$

Check

$$35x + 14 \\ = 7(5x + 2)$$

$$24k - 20 \\ = 4(6k - 5)$$

$$70x + 20 \\ = 10(7x + 2)$$

$$\begin{aligned} & -25a + 10 \\ = & -5(5a - 2) \end{aligned}$$

Check the signs!

$$\begin{aligned} & -4n - 6 \\ = & -2(2n + 3) \end{aligned}$$

$$\begin{aligned} & -49x + 70 \\ = & -7(7x - 10) \end{aligned}$$

$$\begin{aligned} & -8k + 36 \\ = & -4(2k - 9) \end{aligned}$$

$$\begin{aligned} & -30n - 30 \\ & = -30(n + 1) \end{aligned}$$

$$\begin{aligned} & 60 - 54n \\ & = 6(10 - 9n) \\ & = 6(-9n + 10) \end{aligned}$$

Variable term
has to be FIRST!

$$\begin{aligned} & -6 - 3n \\ & = -3(2 + n) \\ & = -3(n + 2) \end{aligned}$$

$$\begin{aligned} & 5k - 8 \\ & = 5k - 8 \end{aligned}$$

HOMework

Blue WS 4

DUE Monday