

NOVEMBER 20, 2014^{4TH}

STARTER

Simplify each expression.

$$\begin{aligned} 1) \quad & -5(3x - 5) + 2 \\ & = -15x + 25 + 2 \\ & = -15x + 27 \end{aligned}$$

$$\begin{aligned} 2) \quad & 3(1 + 5r) - 4r \\ & = 3 + 15r - 4r \\ & = 11r + 3 \end{aligned}$$

$$\begin{aligned} 3) \quad & -4 + 3(2x + 3) \\ & = -4 + 6x + 9 \\ & = 6x + 5 \end{aligned}$$

$$\textcircled{10} \quad 1.53 + 0.4(m - 1.3)$$

$$= \underline{1.53} + 0.4m - \underline{0.52}$$

$$\begin{array}{r} 1.3 \\ 0.4 \\ \hline .52 \end{array}$$

$$= 0.4m + 1.01$$

$$\textcircled{5} \quad -(1 + (x - 3)) \cdot -5$$

$$\begin{array}{r} +1.53 \\ - .52 \\ \hline 1.01 \end{array}$$

$$= -(-5x + 15)$$

$$= -5x + 14$$

$$\textcircled{12} \quad -1.4n + 0.5(n - 0.5)$$

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

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

$$= -0.9n - 0.25$$

11/20 - Factoring Out Common Factors

What are **FACTORS**?

Numbers that you times to get another number.

Numbers that divide evenly into others.

Name all the factors of the given numbers:

12
1
2
3
4
6
12

~~5~~
~~7~~
~~8~~
~~9~~
~~10~~
~~11~~

30
1
2
3
5
6
10
15
30

~~4~~
~~7~~
~~8~~
~~9~~

48
6
8
12
16
24
48

Random

What are **Common Factors**

Factors that are the same for 2 different numbers

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

24, 40

1
2
3
4
6
8
12
24

1, 2, 4, 8

30, 45

1	30
2	15
3	10
5	6

1, 3, 5, 15

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

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

32, 24

8

18, 27

9

48, 36

12

The biggest #
that \div 's into
both

Rewrite each by factoring out the GCF.

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

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

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

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

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

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

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

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

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

$$\begin{aligned} & -6 - 3n \\ = & -3n - 6 \\ = & -3(n+2) \end{aligned} \quad 5k - 8$$

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

$$\begin{aligned} & 60 - 54n \\ = & -54n + 60 \end{aligned}$$

$$= -6(9n - 10)$$

HOMework

Buff WS4

DUE Monday

$$6n - 18 \quad -4k + 12$$

(Note: A green arrow points from the 6 in the first expression to the 6 in the second expression, and another green arrow points from the 18 in the first expression to the 12 in the second expression.)

$$= 6(n - 3) \quad -4(k - 3)$$

$$-8b - 6$$

$$= -2(4b + 3)$$