

December 16, 2014^{1st}_{2nd}

Starter

Steven, **David** and Mike had a contest to see who could bike the most miles.

Together, **Steven** and **David** biked 21 miles.

The combined total for **Steven** and **Mike** was 19.

Mike and **David** biked a total of 22 miles.

Who was the winner?



12/16 Solving Multi-Step Equations with Integers

4 steps for solving today's multi-step equations:

- 1) **Get rid of ()**
"shoot the arrows"
- 2) **Combine LIKE terms**
- 3) **Undo +/-**
Get rid of "extras"
- 4) **Undo \times/\div**

$$3(4k - 3) = -81$$

$$12k - 9 = -81$$

$+9$ $+9$

$$\frac{12k}{12} = \frac{-72}{12}$$

$$k = -6$$



Try these...

$$-96 = 3(6x - 2)$$

$$-96 = 18x - 6$$

+6 +6

$$\frac{-90}{18} = \frac{18x}{18}$$

$$-5 = x$$

$$-3(3x + 4) = -66$$

$$-9x - 12 = -66$$

+12 +12

$$\frac{-9x}{-9} = \frac{-54}{-9}$$

$$x = 6$$

$$-69 = -3(-4n - 1)$$

$$-69 = 12n + 3$$

-3 -3

$$\frac{-72}{12} = \frac{12n}{12}$$

$$-6 = n$$



Now a DOUBLE!!!

$$\begin{aligned} & -2(6n-4) + 3(n-6) = -1 \\ & -12n + 8 + 3n - 18 = -1 \\ & -9n - 10 = -1 \\ & \quad \quad \quad +10 \quad +10 \\ & \quad \quad \quad \frac{-9n}{-9} = \frac{9}{-9} \\ & \quad \quad \quad n = -1 \end{aligned}$$



Watch the signs on this one!

$$-6(r+5) - 5(-3r+2) = -31$$

$$-6r - 30 + 15r - 10 = -31$$

$$9r - 40 = -31$$
$$+40 \quad +40$$
$$\frac{9r}{9} = \frac{9}{9}$$

$$r = 1$$



Homework

Pink WST

Due Thursday

