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*November 28, 2011*

*No warm-up...*

*Anyone need to make up  
Tuesday's test?*

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## 11/28 - Solving Two-Step Equations with Multiply

**Undo** means:

1. Use the number on the same side of the equation as the variable
2. Do the opposite operation
3. Do it on both sides

So... undo the add or subtract:

$$\begin{array}{r} x + 5 = -1 \\ -5 \quad -5 \\ \hline x = -6 \end{array}$$

$$\begin{array}{r} -4 = n - 9 \\ +9 \quad +9 \\ \hline 5 = n \end{array}$$

Undo the multiply:

$$\begin{array}{r} 3b = -12 \\ \frac{3b}{3} = \frac{-12}{3} \\ \hline b = -4 \end{array}$$

$$\begin{array}{r} 20 = -6k \\ \frac{20}{-6} = \frac{-6k}{-6} \\ \hline -3\frac{1}{3} = k \end{array}$$

When there are 2 operations,  
save the one connected to the variable for last.

Connected to x

$$\begin{array}{l} \downarrow \\ 2x + 1 = 3 \\ \quad -1 \quad -1 \\ \hline 2x = 2 \\ \quad \underline{2} \quad \underline{2} \\ x = 1 \end{array}$$

Do this one first

Connected to x

$$\begin{array}{l} \downarrow \\ -10 = -5 + 4n \\ \quad +5 \quad +5 \\ \hline -5 = 4n \\ \quad \underline{4} \quad \underline{4} \\ -\frac{5}{4} = n \end{array}$$

Do this one first

**TRY THESE...**

$$\begin{array}{r} 3b + 4 = 16 \\ -4 \quad -4 \\ \hline 3b = 12 \\ \frac{3}{3} \quad \frac{3}{3} \\ b = 4 \end{array}$$

$$\begin{array}{r} -18 = -10 + 4k \\ +10 \quad +10 \\ \hline -8 = 4k \\ \frac{-8}{4} = \frac{4k}{4} \\ -2 = k \end{array}$$

$$\begin{array}{r} 2x - 5 = -17 \\ +5 \quad +5 \\ \hline 2x = -12 \\ \frac{2}{2} \quad \frac{2}{2} \\ x = -6 \end{array}$$

$$\begin{array}{r} -20 = 7 - 3n \\ -7 \quad -7 \\ \hline -27 = -3n \\ \frac{-27}{-3} = \frac{-3n}{-3} \\ 9 = n \end{array}$$

$$\begin{array}{r|l}
 5r + 4 & = -8 \\
 -4 & -4 \\
 \hline
 5r & = -12 \\
 \frac{5r}{5} & = \frac{-12}{5} \\
 r & = -2\frac{2}{5}
 \end{array}$$

$$\begin{array}{r|l}
 25 - 6c & = -4 \\
 -25 & -25 \\
 \hline
 -6c & = -29 \\
 \frac{-6c}{-6} & = \frac{-29}{-6} \\
 c & = 4\frac{5}{6}
 \end{array}$$

$$\begin{array}{r|l}
 15 & = -4v - 11 \\
 +11 & +11 \\
 \hline
 26 & = -4v \\
 \frac{26}{-4} & = \frac{-4v}{-4} \\
 -6\frac{2}{4} & = v \\
 -6\frac{1}{2} & = v
 \end{array}$$

$$\begin{array}{r|l}
 -20 & = 8 + 6m \\
 -8 & -8 \\
 \hline
 -28 & = 6m \\
 \frac{-28}{6} & = \frac{6m}{6} \\
 -4\frac{4}{6} & = m \\
 -4\frac{2}{3} & = m
 \end{array}$$

# Homework

Pink worksheet WS9

due Tuesday