

Absolute value.

Monday, November 6, 2017 1:25 PM

$$|5| = 5$$

$$|-7| = 7$$

$$|x| = 3$$

$$x = 3$$

$$x = -3$$

$$|x| = 7$$

$$x = 7$$

$$x = -7$$

$$|2x - 7| = 10$$

↙

↘

$$2x - 7 = 10$$

$$2x - 7 = -10$$

$$2x = -3$$

$$x = -\frac{3}{2}$$

$$2x = 17$$

$$x = \frac{17}{2}$$

$$|2x+5| + \underset{-6}{6} = \underset{-6}{10}$$

$$|2x+5| = 4$$

$$2x+5 = -4$$

$$2x = -9$$

$$x = -\frac{9}{2}$$

$$2x+5 = 4$$

$$2x = -1$$

$$x = -\frac{1}{2}$$

$$\cancel{-7} |3x+1| = -42$$

$\cancel{-7}$

Do NOT distribute

$$|3x+1| = 6$$

↙

↘

$$3x+1 = -6$$

$$3x = -7$$

$$x = -\frac{7}{3}$$

$$3x+1 = 6$$

$$3x = 5$$

$$x = \frac{5}{3}$$

$$|7x - 10| = -17$$

NO CAN DO!

No Solution

$$\frac{-3|3x + 10| = -21}{-3}$$

$$|3x + 10| = 7$$

↙ ↘

old:

$$5x - 9 = 42$$

New

$$3|2x - 11| + 6 = 42$$

$$5x - 9 = 42$$



$$3|2x-11|+6=42$$

$$\begin{array}{r} -6 \quad -6 \\ \hline \end{array}$$

$$3|2x-11|=36$$

3

$$|2x-11|=12$$



$$2x-11=-12$$

$$2x-11=12$$

$$2x=1$$

$$2x=23$$

$$x = \frac{1}{2}$$

$$x = \frac{23}{2}$$