


8<sup>th</sup> Grade Math

One Step  
Equations  
Using Algebra Tiles

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# Review: Tile Values

$$\boxed{1} = +1$$

$$\boxed{-1} = -1$$

$$\boxed{x} = X$$

$$\boxed{-x} = -X$$

$$\boxed{x^2} = X^2$$

$$\boxed{-x^2} = -X^2$$


Rule: A red tile negates (eliminates) a colored tile of the same size and shape by forming a zero pair!

So...

$\boxed{1} \boxed{1} \boxed{1} = 3$      $\boxed{x^2} \boxed{x^2} \boxed{x^2} \boxed{x^2} = 4x^2$

$\begin{matrix} \boxed{x} \\ \boxed{x} \\ \boxed{x} \\ \boxed{x} \end{matrix} = 4x$

$\boxed{-x^2} \boxed{-x^2} \boxed{x} \boxed{x} \boxed{1} \boxed{1}$   
 $-2x^2 + (-2x) + (-2)$

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# One Step Equations - using Addition and subtraction

$$\begin{array}{r} x + 2 = 5 \\ -2 = -2 \\ \hline x = 3 \end{array}$$



$x + 11 = 11$

↑  
Need to get x by itself!

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Try  $X + 2 = 3$   
 $+2 = +2$   

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 $X = 5$

$X + 2 = 3$   
 $+2 = +2$   

---

 $X = 5$

Isolate

Try  $X + 1 = -3$   
 $-1 = -1$   

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 $X = -4$

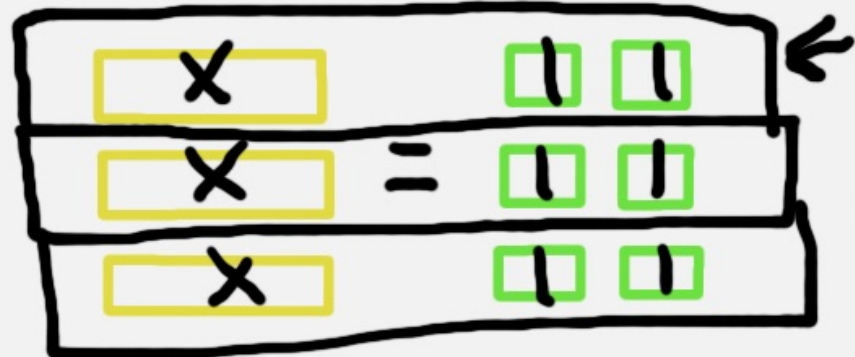
alone

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Finally...

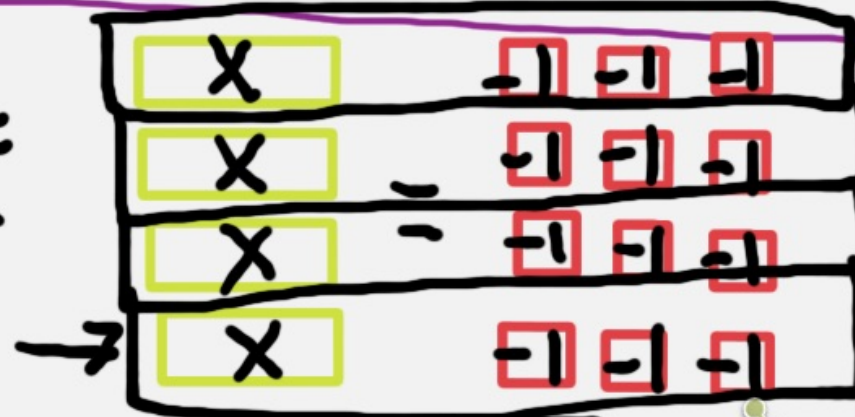
$$\frac{3x}{3} = \frac{6}{3}$$

$$x = 2$$



$$\frac{4x}{4} = \frac{-12}{4}$$

$$x = -3$$



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