

Topic/Objective:

7.5 Terms on both sides

Name:

Class/Period

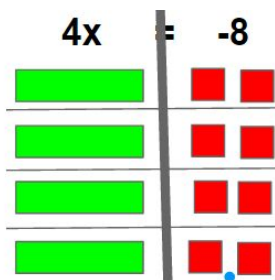
Date:

Essential Question (Big Idea):

What if there's an x on both sides?

$$3x + 1 = 4x - 7 - 5x$$

Modeling



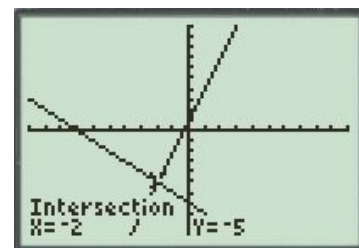
Algebra

$$\begin{array}{rcl}
 3x + 1 & = & 4x - 7 - 5x \\
 3x + 1 & = & \cancel{4x} - 7 \\
 +x & & +x \\
 \hline
 4x + 1 & = & -7 \\
 \cancel{4x} - 1 & & \cancel{4x} - 1 \\
 \hline
 +x & = & -8 \\
 \hline
 x & = & -2
 \end{array}$$

Table

X	Y ₁	Y ₂
-5	-14	-2
-4	-11	-3
-3	-8	-4
-2	-5	-5
-1	-2	-6

Graph



How to use this method to solve an algebra problem:

Draw pictures until one green x is by itself

Do the opposite, to both sides, until x is by itself

Move all the x's to the left
(by adding x)

Move all the numbers to the right
(by subtracting 1)

Always wait to divide until the last step

Set Y₁ as the left side of the equation
 $Y_1 = 3x + 1$

Set Y₂ as the right side of the equation
 $Y_2 = 4x - 7 - 5x$

Make a table

Look for what value of x will make $Y_1 = Y_2$

Set Y₁ as the left side of the equation
 $Y_1 = 3x + 1$

Set Y₂ as the right side of the equation
 $Y_2 = 4x - 7 - 5x$

Draw a graph

Look for where the two lines intersect

$3x - 1 = 4x + 7 - 5x$

Modeling	Algebra	Table	Graph
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How to use this method to solve an algebra problem:

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Summary: