

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

$$4x = -8$$

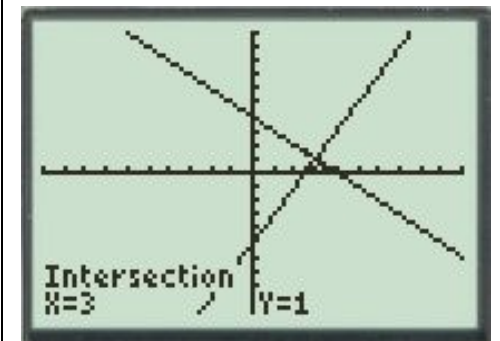
Algebra

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

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

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

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

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

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

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

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

Make a table

Draw a graph

Always wait to divide until the last step

Look for what value of x will make $Y1 = Y2$

Look for where the two lines intersect

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

Modeling	Algebra	Table	Graph

Summary: