

Topic/Objective:

7.8 Uncommon denominators

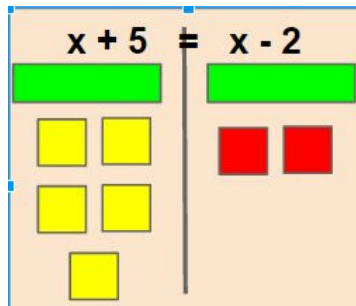
Name:

Class/Period

Date:

Essential Question (Big Idea):

What if all the x's cancel?

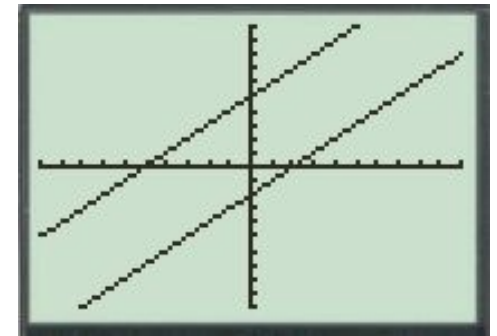


$$\cancel{x} + 5 = \cancel{x} - 2$$

$$5 = -2$$

X	Y ₁	Y ₂
0	5	-2
1	6	-1
2	7	0
3	8	1
4	9	2
5	10	3
6	11	4

X=6



How to use this method to solve an algebra problem:

Draw pictures until one green x is by itself

Move all the x's to the left
All the x's cancel!

5 is NOT -2, so no value of x will solve this problem.

Set Y₁ as the left side of the equation
 $Y_1 = x + 5$

Set Y₂ as the right side of the equation
 $Y_2 = x - 2$

Make a table

Y₁ is never equal to Y₂

Set Y₁ as the left side of the equation
 $Y_1 = x + 5$

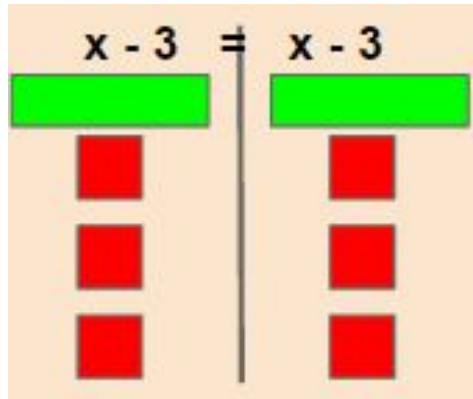
Set Y₂ as the right side of the equation
 $Y_2 = x - 2$

Draw a graph

The two lines never intersect

$$x - 3 = x - 3$$

Modeling



Algebra

$$\cancel{x} - 3 = \cancel{x} - 3$$

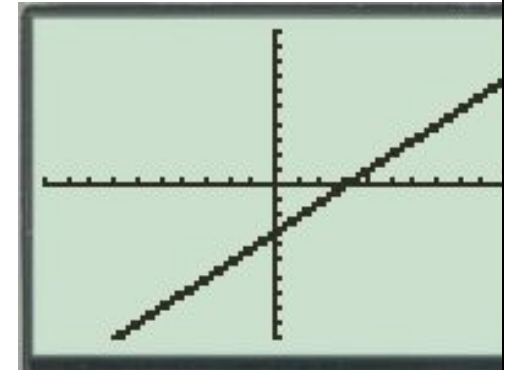
$$-3 = -3$$

Table

X	Y ₁	Y ₂
0	-3	-3
1	-2	-2
2	-1	-1
3	0	0
4	1	1
5	2	2
6	3	3

X=0

Graph



How to use this method to solve an algebra problem:

Draw pictures until one green x is by itself

Move all the x's to the left
All the x's cancel!

-3 is ALWAYS -3, so ANY value of x will solve this problem.

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

Set Y2 as the right side of the equation
 $Y2 = x - 3$

Make a table

Y1 is always equal to Y2

Set Y1 as the left side of the equation
 $Y1 = x + 5$

Set Y2 as the right side of the equation
 $Y2 = x - 2$

Draw a graph

The two lines overlap everywhere