

Name: Key  
Date: \_\_\_\_\_

Mr. Johnson  
Math 8

### Lesson 6.1 – Solving Equations Using Models

This unit is the most important unit of the year. You will use the skills you learn in this unit throughout your high school education. SO PAY ATTENTION!

Algebra Tiles:

One yellow tile represents: +1



+1

One red tile represents: -1



-1

When one red and one yellow tile are combined they represent: 0

*Known as a zero pair*

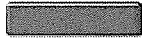
One yellow variable tile represents any positive variable.

Ex.  $x$



The red variable tile represents any negative variable.

Ex.  $-x$



Investigate:

Complete the Investigate activity on page 318 of your textbook. Show your work below!

*(give students algebra tiles)*

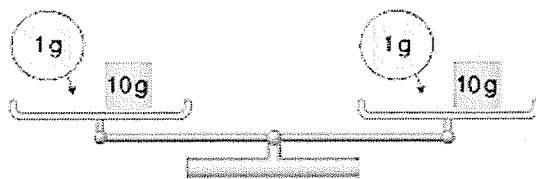
Notes:

We have already learned that we can model equations by using algebra tiles. Another way to solve equations using models is by using a balance scale.

You may have heard the phrase before:

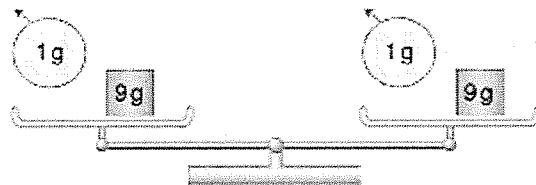
"whatever you do to one side of the equation, do" other <sup>to the</sup>

This phrase also applies in the usage of balance scales. For example we add the same mass:



The scales remain balanced.

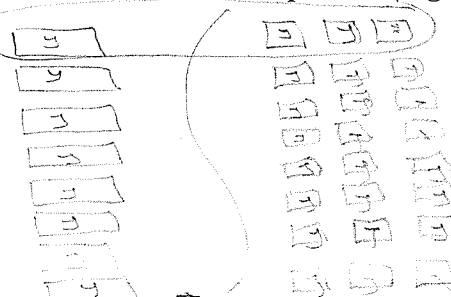
or remove the same mass:



The scales remain balanced.

Examples: Use a model to solve each equation. (*algebra tiles or balance scales*)

1.  $8c = 24$



$c = 3$

2.  $3a + 4 = 13$



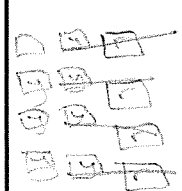
add 8 yellows  
↓



$a = 3$

demonstrate  
or  
over head  
w/ tiles

3.  $-4 = 2x - 8$



$x = 2$

Assignment:

Pg. 324-326  
#s 5-13, 15