

Name: Key
Date: _____

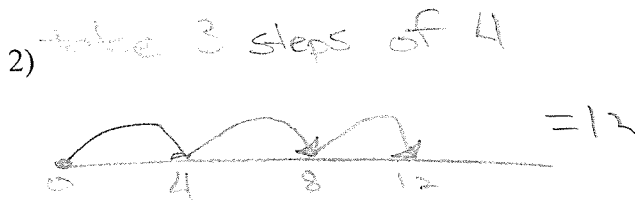
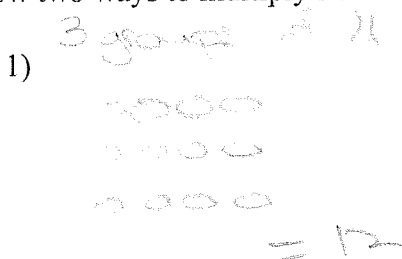
Mr. Johnson
Math 8

Lesson 2.1 – Using Models to Multiply Integers

Think it out....

What does multiplication mean to you?

Show two ways to multiply 3×4 with a model of each.



Notes:

etc.

Lets look at two ways to represent multiplication of positive and negative numbers using models.

Method #1 - Using a number line

Think of the number line like a sidewalk where each step represents a certain distance from where you started your walk.

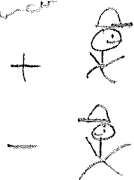
Rules!!!

- always start at zero
- for positive #'s walk towards the right side of your page
- for negative #'s walk towards the left side of your page

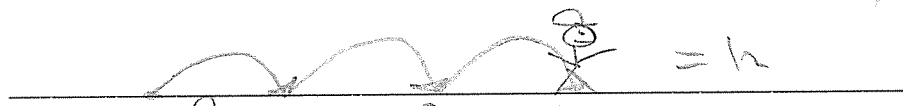
* remember facing direction of step

Examples:

the first # represents which way the stick man faces



1) 3×4



2) -5×2



3) 4×-4



4) 2×-5

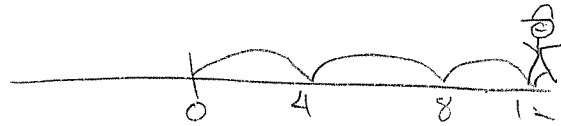


Think it out...again!

Can you think how we could represent -3×-4 using a number line? Is it any different than before?

face the negative end of the line, then walk backwards 3 steps of size 4 to get 12.

Method #2 - Using integer tiles.



integer tiles are a great way for you to model positive and negative integers.

Today, yellow will represent positive integers and red will represent negative integers.

Investigate:

* introduce how to use algebra tiles first (+/-, zero property)

With the coloured tiles students will answer the following questions. Once you have a modeled the solution I want you to sketch a picture showing how you got your answer. Keep in mind there is many different ways to complete these questions.

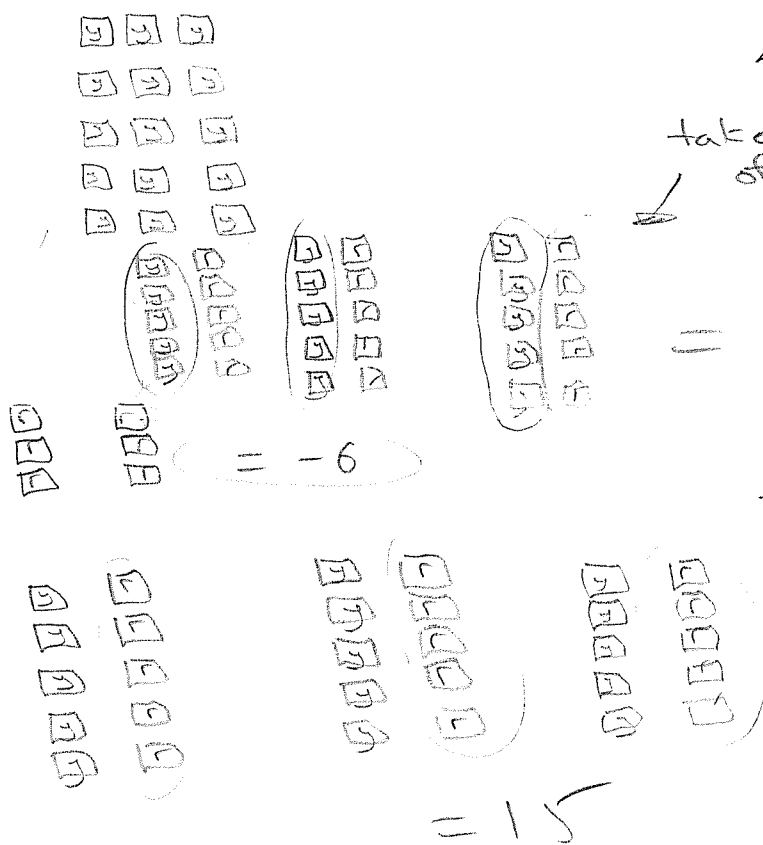
Investigate Questions: (SHOW WORK!!!)

Show sketches here!

1) 5×3
 means remove = 15

Use zero property 2) -3×5
 =
 two groups of -3 3) ~~3 x -3~~
 =

Use zero property 4) -3×-5
 =



take out 3 sets of 5 yellow tiles

take out 3 sets of red tiles