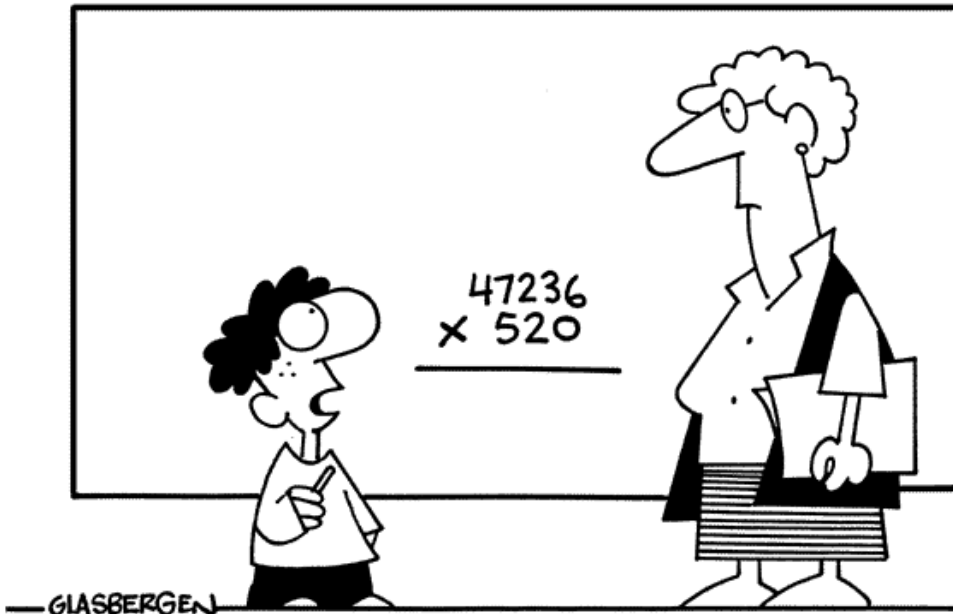


Chapter 2.1 Using models to Multiply Integers

Tuesday, September 1, 2015 10:39 AM

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"Aren't there enough problems in the world already?"

What is an integer?

Integer: set of whole numbers that include negative numbers but no fractions.

example: $-3, -2, +1, +4$ \mathbb{Z}

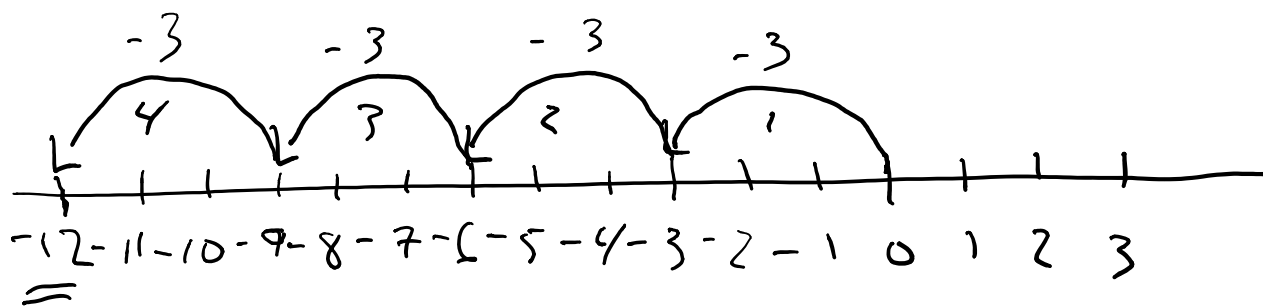
You can think of multiplication as repeated addition.

$4 \times (-3)$ is the same as adding -3 four times

As a sum: $(-3) + (-3) + (-3) + (-3) = -12$

As a product: $4 \times (-3) = -12$

On a number line:

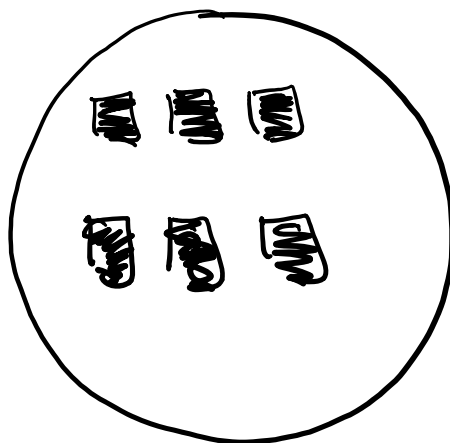


You can use algebra tiles to multiply integers. \square = positive
 \blacksquare = negative

Multiply $(+2) \times (-3)$

+2 is a positive integer
-3 is modeled by 3 black tiles
put 2 sets of 3 black tiles into the circle

The 6 black tiles represent -6
so $(2) \times (-3) = -6$



$$\approx (-2) \times (-5) = 10$$



Multiply $(-2) \times (-5)$

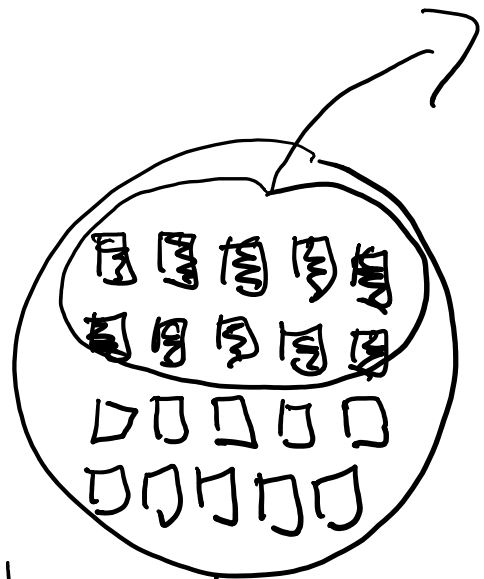
-2 is a negative integer

-5 \rightarrow 5 black tiles

We need to take away 2 sets of 5 black tiles

- Add zero pairs until there are enough black tiles to take away.

 +  = zero pair



Now we have 10 white tiles left
left : $50 - (-2) \times (-5) = 10$

p. 68-69 #5ac, 6bd, 7, 8ac, 9ace,
11acef, 13, 16, 20bd