

Modeling Activity

(Use with Lesson 2-6)

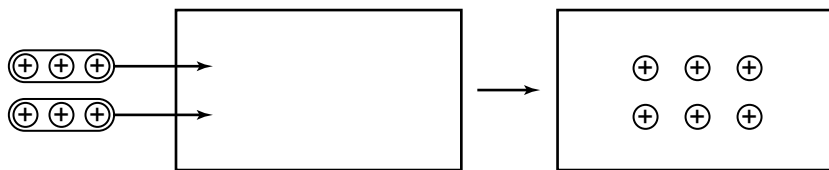
Multiplying Integers

Materials: counters,  integer mat

You can use counters to model multiplication of integers. In these activities, yellow counters represent positive integers, and red counters represent negative integers. Remember that a zero-pair is found by pairing one positive counter with one negative counter. Also, zero-pairs can be removed or added without changing the value of the set.

Activity 1: Use counters to find the product $+2 \times (+3)$.

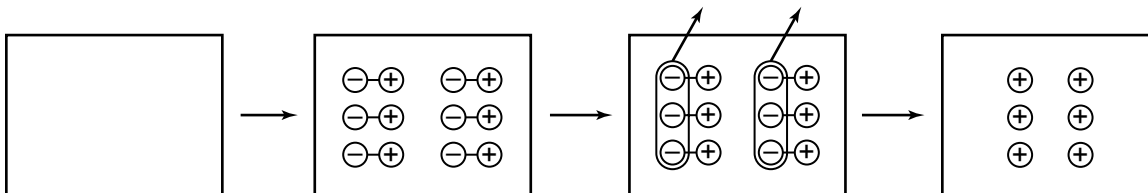
- Think of $+2 \times (+3)$ as *putting in* two sets of three positive counters. Place two sets of three positive counters on the mat.



- Since there are 6 positive counters on the mat, the product is $+6$. Therefore, $+2 \times (+3) = +6$.

Activity 2: Use counters to find the product $(-2)(-3)$.

- Think of $(-2)(-3)$ as *taking out* two sets of three negative counters. In order to accomplish this task, first put in as many zero-pairs as you need.



- Since there are 6 positive counters on the mat, the product is $+6$. Therefore, $(-2)(-3) = +6$.

MODEL

Use counters to find each product.

- | | | | |
|---------------|----------------|----------------|----------------|
| 1. $(+3)(+4)$ | 2. $(+3)(-4)$ | 3. $(-3)(+4)$ | 4. $(-3)(-4)$ |
| 5. $(+2)(+5)$ | 6. $(+2)(-5)$ | 7. $(-2)(+5)$ | 8. $(-2)(-5)$ |
| 9. $(+4)(+2)$ | 10. $(+4)(-2)$ | 11. $(-4)(+2)$ | 12. $(-4)(-2)$ |

WRITE

13. Write a paragraph explaining how to find the product of two integers without using counters. Be sure to include all possibilities.