

Modeling Activity

(Use with Lesson 1-1)

Evaluating Algebraic Expressions

Materials: counters,  cups 

You can use counters and cups to evaluate algebraic expressions.

Activity 1: Use cups and counters to evaluate the expression *the sum of 6 and some number* if the unknown value is 3.

- Use 6 counters and a cup to represent *the sum of 6 and some number*.



- Place 3 counters in the cup.

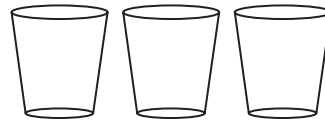


- Empty the cup and count all the counters. There are 9 counters altogether. Therefore, the value of the expression is 9.

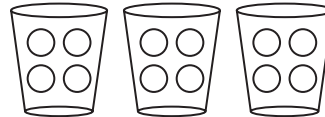


Activity 2: Use cups and counters to evaluate *three times some number* if the unknown value is 4.

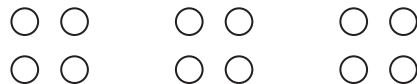
- Use 3 cups to represent *three times some number*.



- Place 4 counters in each cup.



- Empty the cup and count all the counters. There are 12 counters altogether. Therefore, the value of the expression is 12.



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Use counters and cups to complete each exercise.

- Model the phrase *six more than the quantity three times a number*. Place 4 counters in each cup. How many counters are there in all?
- Model the phrase *three more than the quantity two times a number*. Place 7 counters in each cup. How many counters are there in all?

3. Sample answer: Replace the unknown value with the given number and perform the operations according to the order of operations.

3. Explain how to evaluate an algebraic expression without using counters and cups.