

# 4.4 Evaluate Expressions

## NOTES

MATH 7

Write your  
questions here!



Evaluate =

$$2x - 5 \text{ when } x = 2$$

$$4x + 7y \text{ when } x = 5 \text{ and } y = 2$$

$$\frac{9}{y} + 2 \text{ when } y = -3$$

$$4m + 1 + 4m + 6 \text{ when } m = 4$$

### Write and Evaluate Expressions

A large bucket of popcorn costs \$4. You buy  $b$  buckets of popcorn plus \$6 in candy. How much did you spend?

- How much would spend if you bought 3 buckets?
- How much would spend if you bought 5 buckets?
- How much would spend if you bought 10 buckets?

### Equivalent

Which value of  $x$  makes  $4x - 5 = 11$  a true statement?

- $x = 2$
- $x = 3$
- $x = 4$
- $x = 5$

### SUMMARY:

Now,  
summarize  
your notes  
here!



Evaluate the following.

1.  $8 + 2x$  when  $x = 4$

2.  $4(2x + 3)$  when  $x = -2$

3.  $x^2 - 3$  when  $x = 5$

4.  $5 + (n - 2)$  when  $n = 4$

5.  $3a + 2b - 1$  when  $a = 3$   
and  $b = -2$

6.  $-2(3 + x) + 3y$  when  $x = 4$   
and  $y = 2$

7.  $4h + 5 - 2h$  when  $h = 6$

8.  $3w + (w + g)$  when  $w = 3$   
and  $g = -2$

9.  $\frac{2n+4}{n}$  when  $n = 4$

Write an algebraic expression for each situation. Evaluate the expression for the given values.

10. Bob has 6 pies. He bakes 2 pies every hour.  
How many pies does he have after  $h$  hours?

a. How many pies will he have in 4 hours?

b. How many pies will he have in 5 hours?

c. How many pies will he have in 10 hours?

**Write an algebraic expression for each situation. Evaluate the expression for the given values.**

11. The temperature at noon is  $18^\circ$ . The temperature raises 3 degrees every hour. What is the temperature after  $h$  hours?
- What is the temperature after 1 hours?
  - What is the temperature after 2 hours?
  - What is the temperature after 3.5 hours?

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12. Museum tickets for adults cost \$5. Tickets for children cost \$3. What is the total cost if you buy  $a$  adult tickets and  $c$  children tickets?
- How much would you spend if you buy 3 adult tickets and 4 children tickets?
  - How much would you spend if you buy 4 adult tickets and 5 children tickets?

**Multiple Choice**

- |   |   |
|---|---|
| <p>13. Which value of <math>x</math> makes <math>3x + 4 = 16</math> a true statement?</p> <ol style="list-style-type: none"><li><math>x = 3</math></li><li><math>x = 4</math></li><li><math>x = 5</math></li><li><math>x = 6</math></li></ol>     | <p>14. Which value of <math>y</math> makes <math>2(y - 5) = 8</math> a true statement?</p> <ol style="list-style-type: none"><li><math>y = 7</math></li><li><math>y = 8</math></li><li><math>y = 9</math></li><li><math>y = 10</math></li></ol>   |
| <p>15. Which value of <math>x</math> makes <math>-7 = 2x + 3</math> a true statement?</p> <ol style="list-style-type: none"><li><math>x = -2</math></li><li><math>x = -3</math></li><li><math>x = -4</math></li><li><math>x = -5</math></li></ol> | <p>16. Which value of <math>n</math> makes <math>-3n - 4 = -19</math> a true statement?</p> <ol style="list-style-type: none"><li><math>n = 5</math></li><li><math>n = 6</math></li><li><math>n = -5</math></li><li><math>n = -6</math></li></ol> |

1. Evaluate  $3(m - 4) + 3m$  when  $m = 4$

2. Which value of  $x$  makes  $9 - 3x = 3$  a true statement?

(A)  $x = 0$

(B)  $x = 1$

(C)  $x = 2$

(D)  $x = 3$

3. Mr. Sullivan is selling Boo Gram to raise money for boo-tiful Halloween decorations for the school dance. He has 100 Hershey Kisses to use for Boo Grams. Each Boo Gram uses 3 Hershey Kisses and will sell for \$1.50 each.

**Part A**

Which expression models the number of Hershey Kisses Mr. Sullivan has left given the number of Boo Grams  $b$  made.

(A)  $100 + 3b$

(B)  $3b + 1.50$

(C)  $3b - 1.50$

(D)  $100 - 3b$

**Part B**

Mr. Sullivan makes 21 Boo Grams. Use your equation from Part A to determine how many Hershey Kisses he has left?

**Part C**

How many Boo Grams can Mr. Sullivan make before he runs out of Hershey Kisses?

**EXIT TICKET – Evaluate the following.**

A)

$x^2 - 5x + 1$  when  $x = -2$

B)

$6(2x + 1)$  when  $x = \frac{1}{4}$