

# Algebra: Evaluating Expressions — Set A



Practice Worksheet • [numberbender.com](http://numberbender.com)

Name: \_\_\_\_\_

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## DIRECTIONS

Substitute the given value(s) for each variable, then simplify step by step.

|  |   |
|--|---|
| 1. Evaluate when $x = 3$ :<br><b><math>4x - 1</math></b><br>Answer: _____            | 2. Evaluate when $y = -2$ :<br><b><math>3y + 8</math></b><br>Answer: _____            |
| 3. Evaluate when $n = 5$ :<br><b><math>2n^2 - n</math></b><br>Answer: _____          | 4. Evaluate when $k = -4$ :<br><b><math>k^2 - 3k + 2</math></b><br>Answer: _____      |
| 5. Evaluate when $x=2, y=3$ :<br><b><math>x + 2y</math></b><br>Answer: _____         | 6. Evaluate when $x=2, y=3$ :<br><b><math>3x - y + 4</math></b><br>Answer: _____      |
| 7. Evaluate when $a=-1, b=4$ :<br><b><math>2a + 3b</math></b><br>Answer: _____       | 8. Evaluate when $a=-1, b=4$ :<br><b><math>a^2 - b</math></b><br>Answer: _____        |
| 9. Evaluate when $p=2, q=-3$ :<br><b><math>p^2 - 2pq + q</math></b><br>Answer: _____ | 10. Evaluate when $r=5, s=-2$ :<br><b><math>2r - s^2 + rs</math></b><br>Answer: _____ |

Based on the Numberbender lesson "ALGEBRA - Evaluating Algebraic Expressions | how to?" • [youtu.be/CjxUTr6FxGc](https://youtu.be/CjxUTr6FxGc)

# Answer Key & Solutions

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## TEACHER NOTES

Introductory level. Items 1–4: single variable. Items 5–8: one or two variables with integers. Items 9–10: two variables with negative values.

1. Evaluate when  $x = 3$ :  $4x - 1$

**Answer: 11**

$$4(3) - 1 = 12 - 1 = 11.$$

2. Evaluate when  $y = -2$ :  $3y + 8$

**Answer: 2**

$$3(-2) + 8 = -6 + 8 = 2.$$

3. Evaluate when  $n = 5$ :  $2n^2 - n$

**Answer: 45**

$$2(25) - 5 = 50 - 5 = 45.$$

4. Evaluate when  $k = -4$ :  $k^2 - 3k + 2$

**Answer: 30**

$$16 - 3(-4) + 2 = 16 + 12 + 2 = 30.$$

5. Evaluate when  $x=2, y=3$ :  $x + 2y$

**Answer: 8**

$$2 + 2(3) = 2 + 6 = 8.$$

6. Evaluate when  $x=2, y=3$ :  $3x - y + 4$

**Answer: 7**

$$3(2) - 3 + 4 = 6 - 3 + 4 = 7.$$

7. Evaluate when  $a=-1, b=4$ :  $2a + 3b$

**Answer: 10**

$$2(-1) + 3(4) = -2 + 12 = 10.$$

8. Evaluate when  $a=-1, b=4$ :  $a^2 - b$

**Answer: -3**

$$(-1)^2 - 4 = 1 - 4 = -3.$$

9. Evaluate when  $p=2, q=-3$ :  $p^2 - 2pq + q$

**Answer: 13**

$$4 - 2(2)(-3) + (-3) = 4 + 12 - 3 = 13.$$

10. Evaluate when  $r=5, s=-2$ :  $2r - s^2 + rs$

**Answer: -4**

$$2(5) - (-2)^2 + (5)(-2) = 10 - 4 - 10 = -4.$$