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Module 2 Writing and Simplifying Algebraic Expressions
Lesson 5 Evaluating Expressions



**additional
practice**

Evaluate each expression for the given values of the variables.

1. $-4x^2y^3 - 3$ for $x = -2$, $y = 5$

-2003

2. $[a + 7(b + 3)]^3 \div 5$ for $a = 6$, $b = 2$

 $-\frac{1}{5}$

3. $2|x - y| + 3(y - x)$ for $x = 5$, $y = -3$

-8

4. πr^2h for $r = 2$, $h = 12$

 48π

5. πr^2h for $\pi = 3.14$, $r = 1$, $h = 7$

21.98

6. $a^2 + b^2 - c^2$ for $a = -8$, $b = -11$, $c = 0$

185

7. $\frac{(r - t)(t^2 - 2r + 1)}{r - 1}$ for $r = 5$, $t = -7$

120

8. $\sqrt{a^2 + b^2}$ for $a = 12$, $b = -5$

13

9. $\frac{\sqrt[3]{x} + \sqrt{b}}{\frac{1}{2}x + 11}$ for $x = -64$, $b = 121$

 $-\frac{1}{3}$

10. $\frac{c^2 + 3ab - b^2}{a + b}$ for $a = 2$, $b = 4$, $c = 5$

 $\frac{11}{2}$ or $5\frac{1}{2}$

Evaluate each expression when $a = -1$, $b = -5$, and $c = 6$.

11. $a^3 - |2ac| - c^2(a + 4)$ -121

12. $\frac{5a^2 - 11a - 3}{b + 3c}$ 1

13. $a^2 + b^2 - 2ac^3 - |ab|$ 453

14. $b^2 - 4ac$ 49

Evaluate the expression $\frac{1}{2}(b_1 + b_2)h$ for the variables given.

15. $b_1 = 13$, $b_2 = 8$, $h = 18$ 189

16. $b_1 = 21$, $b_2 = 7$, $h = 12$ 168

17. $b_1 = 1$, $b_2 = 3$, $h = 10$ 20

18. $b_1 = 37$, $b_2 = 43$, $h = 40$ 1600

19. $b_1 = 22$, $b_2 = 12$, $h = 32$ 544

20. $a = 2$, $b = 1$, $h = 3$ 4.5 or $4\frac{1}{2}$

