

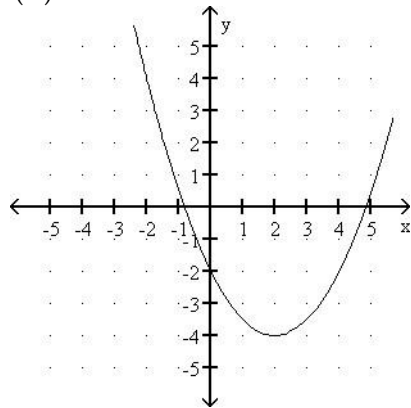
Intermediate Algebra
Chapter 5 & Sec 6.7 Practice Test, Non-Calculator

I. Simplify the expression by combining like terms.

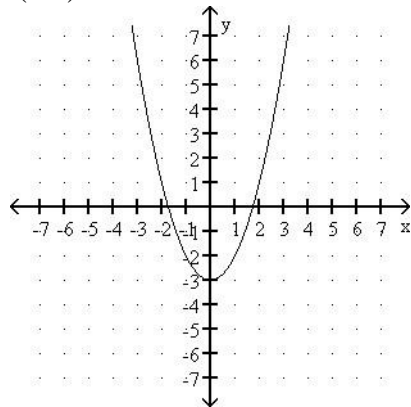
- $3a + 4b - 6a + 3b$
- $6a^3 + 15a + a^3$
- $(x^3 - 4x^2 + 7x - 6) - (-2x^3 + x - 4)$
- $(4c^2 + 3c - 2) + (3c^2 + 4c + 2)$
- $(-3z^2 - 4z + 7) + (2z^2 + 2z - 1)$
- $(2x^3 - 7x^2 + 5) - (-3x^3 + x^2 + 4x - 7)$

II. Use the graph to evaluate.

7. $f(2)$



8. $f(-1)$



III. Multiply and Simplify.

- $(3x + 1)(2x - 5)$
- $3y^3(2y^2 - 7y - 8)$
- $(x + 2)(x^2 - 2x + 3)$

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IV. Factor Completely.

12. $2x^3 + 4x^2 - 3x - 6$

13. $5x^3 - 20x$

14. $5x^2 - 6x + 1$

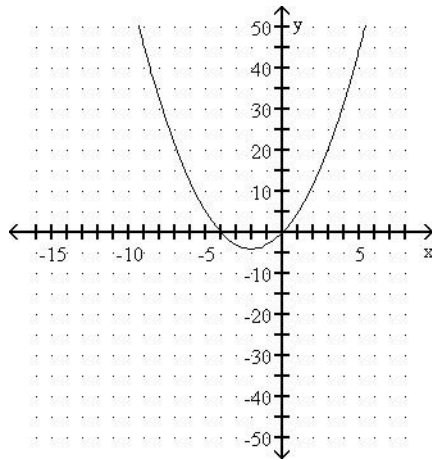
V. Solve the following polynomial equations.

15. $2x^2 + 8x = 0$

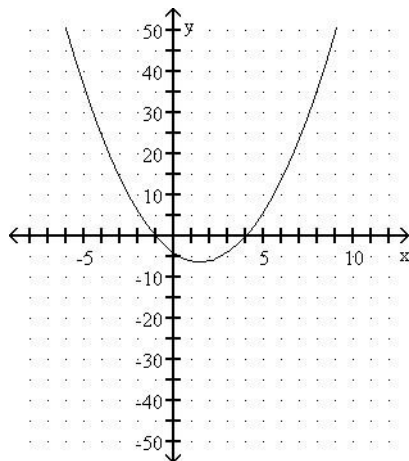
16. $3x^2 = 3x$

VI. Use the graph to solve the equation.

17.



18.



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Answers:

1. $-3a + 7b$
2. $7a^3 + 15a$
3. $3x^3 - 4x^2 + 6x - 2$
4. $7c^2 + 7c$
5. $-z^2 - 2z + 6$
6. $5x^3 - 8x^2 - 4x + 12$
7. -4
8. -2
9. $6x^2 - 13x - 5$
10. $6y^5 - 21y^4 - 24y^3$
11. $x^3 - x + 6$
12. $(2x^2 - 3)(x + 2)$
13. $5x(x + 2)(x - 2)$
14. $(5x - 1)(x - 1)$
15. $x = 0, x = -4$
16. $x = 0, x = 1$
17. $x = -4, x = 0$
18. $x = -1, x = 4$