Chapter 5, Test Form B **Name:**

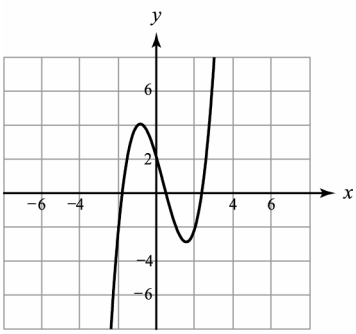
In #1 and #2, simplify by combining like terms.

1. $5y^2+3x^2y-7x^2y+11y^2$ 1. _____

2. $\left(-3x^2-5x+7\right)-\left(4x^3+x^2-4x+6\right)$ 2. _____

3. Evaluate $f\left(x\right)=-2x^2+5x-7$ at $x=3$. 3. _____

4. Use the graph to evaluate $f\left(-2\right)$. 4. _____



In #5 through #8, multiply and simplify.

5. $\frac{2}{3}x\left(9x^2-6\right)$ 5. _____

6. $5xy^4\cdot 2x^3y^2$ 6. _____

7. $\left(3x-5\right)\left(3x+5\right)$ 7. _____

8. $\left(2x+1\right)\left(4x^2-2x+1\right)$ 8. _____

In #9 through #13, factor completely.

9. $8x^2 - 2x - 3$ 9. _____

10. $4x^4 - 4x^2$ 10. _____

11. $x^3 + 3x^2 + 4x + 12$ 11. _____

12. $16x^2 + 24x + 9$ 12. _____

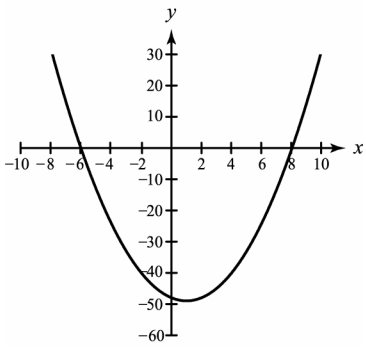
13. $125x^3 - 27$ 13. _____

14. Identify the degree and leading coefficient of the polynomial $4x^5 - 3x^3 + x^2 - 5x + 7$. 14. _____

_____

15. Multiply $\left(3a^2 + b^4\right)^2$. 15. _____

16. Use the graph to factor $x^2 - 2x - 48$. 16. _____



17. Write a polynomial that represents the product of three consecutive integers, where x is the smallest integer. 17. _____

In #18 through #20, use factoring to solve the polynomial equation.

18. $2x^2 - 10x = 0$ 18. _____

19. $2x^2 + 5x = -2$ 19. _____

20. $6x^5 - 6x^3 = 0$ 20. _____