

Chapter Test A

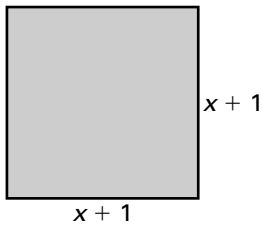
For use after Chapter 10

Find the sum or difference.

1. $(x^2 + 2x + 1) + (4x^2 + 5x + 3)$
2. $(3x^2 + 5x + 4) - (x^2 + 2x + 1)$
3. $(3x^2 + 5x + 8) + (6x^2 + 3x + 2)$
4. $(8x^2 + 6x + 3) - (4x^2 + 3x + 2)$
5. The profits of a company are found by subtracting the company's costs from its revenue. If a company's cost can be modeled by $14x + 120,000$ and its revenue can be modeled by $40x - 0.0002x^2$, what is an expression for the profit?

Find the product.

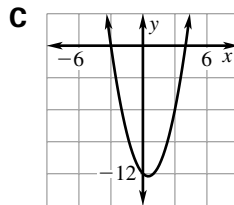
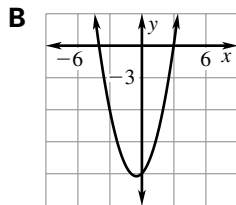
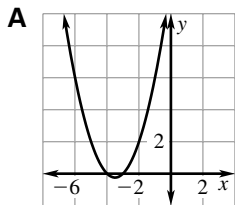
6. $2x(3x - 5)$
7. $(x + 3)(x + 2)$
8. $(2x + 1)(x + 3)$
9. $(x + 1)(x^2 + x + 1)$
10. $(x + 2)(x - 2)$
11. $(x + 5)^2$
12. Find an expression for the area of the figure.



Use the zero-product property to solve the equation.

13. $(x + 4)(x - 2) = 0$
14. $(x + 3)^2 = 0$

Match the function with its graph.



15. $y = (x - 3)(x + 4)$
16. $y = (x + 3)(x - 4)$
17. $y = (x + 3)(x + 4)$

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For use after Chapter 10

Factor the expression.

18. $x^2 + 3x + 2$

19. $x^2 - x - 6$

20. $x^2 - 7x + 10$

21. $x^2 + x - 12$

22. A rectangle has an area given by $A = x^2 + 5x + 6$. Find expressions for the possible length and width of the rectangle.**Factor the expression.**

23. $2x^2 + 5x + 3$

24. $6x^2 + 14x + 4$

25. $x^2 - 9$

26. $x^2 - 8x + 16$

27. $x^2 + 6x + 9$

28. $2x^2 - 4x$

29. $x^3 + 2x^2 - 3x - 6$

30. $x^3 + 4x^2 + x + 4$

Write a quadratic equation that has the given solutions.

31. 3 and 2

32. 1 and 3

Solve the equation by a method of your choice.

33. $x^2 - 2x - 3 = 0$

34. $x^2 + 5x + 6 = 0$

35. $x^2 + 3x - 4 = 0$

36. $x^2 - 6x + 5 = 0$

37. $6x^2 + 5x + 1 = 0$

38. $4x^2 + 15x + 9 = 0$

39. $x^2 - 36 = 0$

40. $x^2 + 12x + 36 = 0$

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