

# Chapter Test C

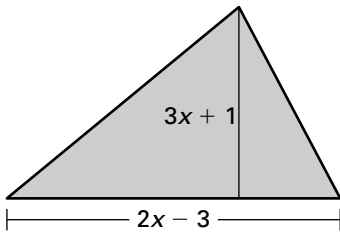
For use after Chapter 10

**Find the sum or difference.**

1.  $(-4x^2 + 9x - 12) + (3x^2 - 4x - 8)$
2.  $(9x^2 - 3x + 4) - (-x^2 + 3x - 5)$
3.  $(5x^2 - 2x - 3) + (7x^2 - 6x + 4)$
4.  $(13x^2 - 12x - 5) - (-4x^2 + 11x - 10)$
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  $10x + 130,000$  and its revenue can be modeled by  $50x - 0.0004x^2$ , what is an expression for the profit?

**Find the product.**

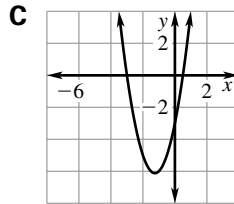
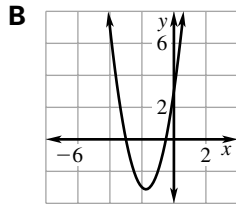
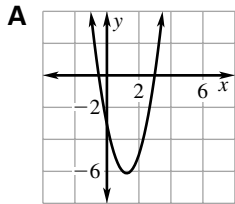
6.  $(9x^2 + 3x - 5)(-4x)$
7.  $(x - 8)(x + 4)$
8.  $(3x - 4)(9x + 5)$
9.  $(2x + 4)(x^2 - x + 1)$
10.  $(2x + 3)(2x - 3)$
11.  $(5x + 2)^2$
12. Find an expression for the area of the figure.



**Use the zero-product property to solve the equation.**

13.  $(2x + 8)(3x - 6) = 0$
14.  $(4x + 12)(2x - 2)(3x - 9) = 0$

**Match the function with its graph.**



15.  $y = (2x + 1)(x + 3)$
16.  $y = (2x - 1)(x + 3)$
17.  $y = (2x + 1)(x - 3)$

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**Chapter Test C**

For use after Chapter 10

**Factor the expression.**

18.  $x^2 + 15x + 56$

19.  $x^2 - 2x - 63$

20.  $x^2 - 8x + 12$

21.  $x^2 + 3x - 28$

22. A rectangle has an area given by  $A = x^2 - 3x - 10$ . Find expressions for the possible length and width of the rectangle.**Factor the expression.**

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

24.  $10x^2 + 4x - 6$

25.  $4x^2 - 25$

26.  $4x^2 - 20x + 25$

27.  $9x^2 + 42x + 49$

28.  $6x^3 - 15x^2 - 9x$

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

30.  $x^3 + 5x^2 - 16x - 80$

**Write a quadratic equation that has the given solutions.**

31.  $-2$  and  $5$

32.  $-3$  and  $-5$

**Solve the equation by a method of your choice.**

33.  $x^2 - 2x - 15 = 0$

34.  $x^2 + 12x = -36$

35.  $x^2 + 3x - 40 = 0$

36.  $x^2 - 9x + 18 = 0$

37.  $6x^2 - 4x - 2 = 0$

38.  $9x^2 - 5x - 4 = 0$

39.  $16x^2 - 25 = 0$

40.  $25x^2 + 50x + 25 = 0$

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