

## 7.6 Practice A

In Exercises 1–12, factor the polynomial.

1.  $6x^2 - 12x - 18$

2.  $5x^2 - 15x - 50$

3.  $9x^2 - 36x + 27$

4.  $2x^2 + 2x - 4$

5.  $6x^2 - 7x - 20$

6.  $2x^2 - 5x - 3$

7.  $4x^2 + 21x - 18$

8.  $2x^2 - 13x - 45$

9.  $3x^2 + 22x - 16$

10.  $-2p^2 + 7p - 6$

11.  $-5v^2 + 31v - 6$

12.  $-6v^2 - 11v - 4$

13. Describe and correct the error in factoring the polynomial.

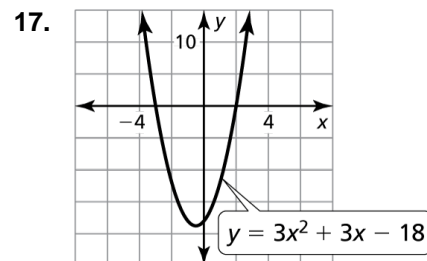
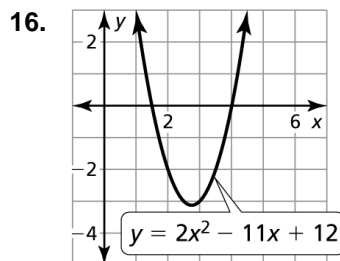
$$\times \quad -2t^2 + 13t - 15 = (2t + 3)(t + 5)$$

In Exercises 14 and 15, solve the equation.

14.  $4x^2 - 4x - 24 = 0$

15.  $3p^2 - 5p - 28 = 0$

In Exercises 16 and 17, find the  $x$ -coordinates of the points where the graph crosses the  $x$ -axis.



18. The height  $h$  (in feet) above the water of a cliff diver is modeled by  $h = -16t^2 + 10t + 26$ , where  $t$  is the time (in seconds). How long is the diver in the air?

19. For what values of  $t$  can  $10x^2 + tx + 8$  be written as the product of two binomials?

In Exercises 20 and 21, factor the polynomial.

20.  $6a^2 - 13ab - 5b^2$

21.  $4x^2 + 11xy - 3y^2$

# 7.6

## Practice B

In Exercises 1–12, factor the polynomial.

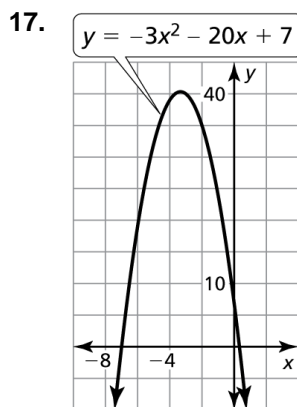
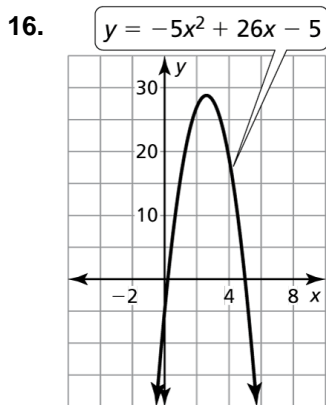
- |                       |                        |                         |
|-----------------------|------------------------|-------------------------|
| 1. $5x^2 - 5x - 30$   | 2. $8x^2 - 16x - 192$  | 3. $6x^2 + 48x + 42$    |
| 4. $2x^2 + 17x - 9$   | 5. $12p^2 - 7p - 10$   | 6. $10w^2 + 24w + 8$    |
| 7. $3y^2 + y - 14$    | 8. $12j^2 - 32j + 5$   | 9. $15d^2 + 16d - 15$   |
| 10. $-9v^2 - 22v - 8$ | 11. $-14m^2 + 13m - 3$ | 12. $-20q^2 + 56q - 15$ |
13. Describe and correct the error in factoring the polynomial.

$\times \quad 6x^2 - 4x + 2 = (2x - 2)(3x + 1)$

In Exercises 14 and 15, solve the equation.

14.  $-12w^2 + 20w - 3 = 0$                       15.  $18t^2 - 2 = 5t$

In Exercises 16 and 17, find the  $x$ -coordinates of the points where the graph crosses the  $x$ -axis.



18. The length of a rectangular patio is 8 feet less than twice its width. The area of the patio is 280 square feet. Find the dimensions of the patio.
19. For what values of  $t$  can  $6x^2 + tx + 25$  be written as the product of two binomials?

In Exercises 20 and 21, factor the polynomial.

20.  $-10r^2 - 11sr + 6s^2$                       21.  $12x^3 + 8x^2y - 20xy^2$