

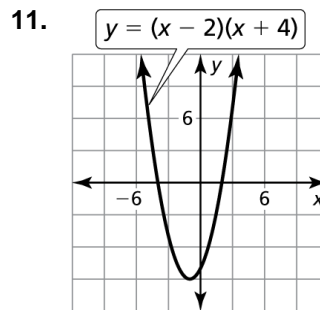
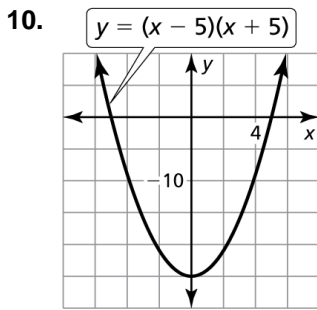
7.4

Practice A

In Exercises 1–9, solve the equation.

1. $x(x - 5) = 0$
2. $6d(d + 8) = 0$
3. $-3t(t + 7) = 0$
4. $(3x + 6)(2x - 10) = 0$
5. $(p + 3)(5p + 1) = 0$
6. $(3q + 2)^2 = 0$
7. $(y - 10)^2 = 0$
8. $t(t + 4)(t - 5) = 0$
9. $7u(u - 9)(2u - 5) = 0$

In Exercises 10 and 11, find the x -coordinates of the points where the graph crosses the x -axis.



In Exercises 12–14, factor the polynomial.

12. $4t^2 + 12t$
13. $10k^3 - 15k^2$
14. $8x^3 - 20x^2$

In Exercises 15–17, solve the equation.

15. $3t^2 - t = 0$
16. $5y^2 + 10y = 0$
17. $21n + 12n^2 = 0$

18. Describe and correct the error in solving the equation.

\times $15t^2 + 5t = 0$
 $5t(3t) = 0$
 $5t = 0$ and $3t = 0$
 $t = 0$ $t = 0$

19. The height y of a jumping frog can be modeled by $y = -16x^2 + 4x$, where x is the time (in seconds) since the frog jumped from the ground. Find the roots of the equation when $y = 0$. Explain what the roots mean in this situation.

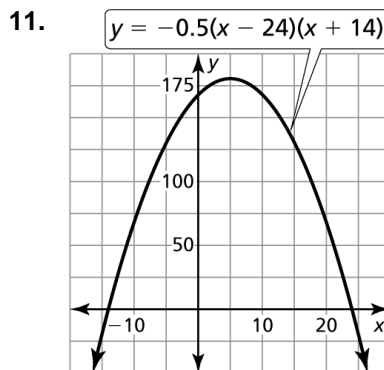
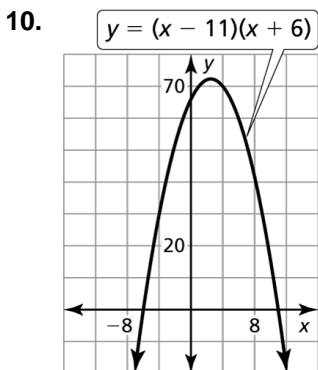
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Practice B

In Exercises 1–9, solve the equation.

1. $-3y(y - 4) = 0$
2. $(d - 6)(d + 1) = 0$
3. $(w + 3)(w - 5) = 0$
4. $(2 - 3x)(2 + 3x) = 0$
5. $9h(h - 4)(3h + 2) = 0$
6. $k(k + 2)^2 = 0$
7. $(y - 7)^2(y + 9) = 0$
8. $(12 - 4n)(3n - 5)(-n + 2) = 0$
9. $(5 - n)\left(3 - \frac{1}{2}n\right)(n - 4) = 0$

In Exercises 10 and 11, find the x -coordinates of the points where the graph crosses the x -axis.



In Exercises 12–14, factor the polynomial.

12. $36v^2 + 24v$
13. $3r^6 - 2r^5$
14. $18a^5 + 12a$

In Exercises 15–17, solve the equation.

15. $16h^2 - 8h = 0$
16. $4w^2 = 12w$
17. $-32n = 8n^2$

18. Describe and correct the error in solving the equation.

\times $15t^2 = 5t$
 $3t = 1$
 $t = \frac{1}{3}$
 The root is $t = \frac{1}{3}$.

19. Write a polynomial of degree 3 whose only roots are $x = 2$ and $x = \frac{2}{5}$. Is there another polynomial of degree 3 that has the same roots?