Name_____ Date _____

2.4 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. $(3q + 2)^2 = 0$

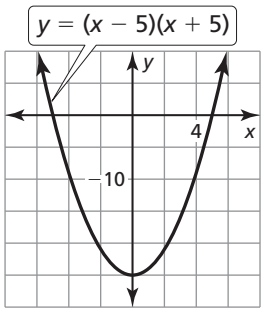
7. $(y - 10)^2 = 0$

8. $t(t + 4)(t - 5) = 0$

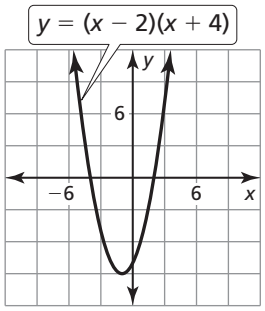
9. $7u(u - 9)(2u - 5) = 0$

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

10.



11.



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.

$$\begin{aligned} 15t^2 + 5t &= 0 \\ 5t(3t) &= 0 \\ 5t = 0 \text{ and } 3t &= 0 \\ t = 0 \qquad t &= 0 \end{aligned}$$

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.