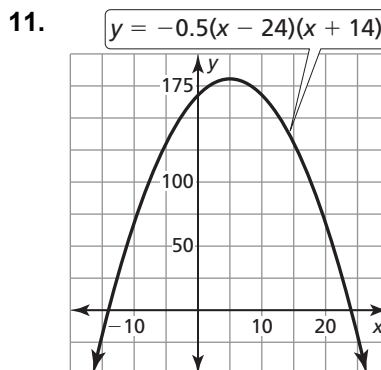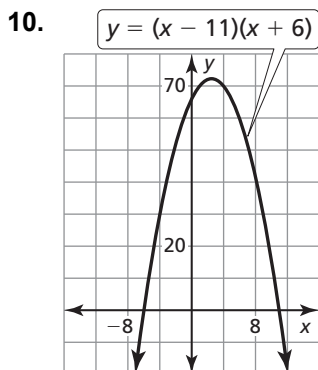Name _____ Date _____

2.4   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.

10.

$y = (x - 11)(x + 6)$

11.

$y = -0.5(x - 24)(x + 14)$

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.

$$
\begin{aligned}
15t^2 &= 5t \\
3t &= 1 \\
t &= \frac{1}{3}
\end{aligned}
$$

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?