

LESSONS 77–79 Graphing Polynomial Functions

(Lesson 77) Graph. State the zeros, y -intercept, and end behavior.

1. $f(x) = x(x - 4)$

2. $f(x) = -x(x + 2)(x - 2)$

3. $f(x) = (x + 1)(x - 2)(x - 3)$

4. $f(x) = -x(x + 1)(x - 2)(x - 4)$

(Lesson 78) Graph. State the zeros and their multiplicity, y -intercept, and end behavior.

5. $f(x) = (x + 3)(x - 1)$

6. $f(x) = -3x^2(x + 2)$

7. $f(x) = 2x(x - 1)(x - 3)$

8. $f(x) = -\frac{1}{4}(x + 2)^2(x - 2)^2$

(Lesson 79) Graph. State the zeros and their multiplicity, y -intercept, and end behavior.

9. $f(x) = 2x^2 - 2$

10. $f(x) = -x^3 + 4x$

11. $f(x) = x^3 + x^2 - 4x - 4$

12. $f(x) = x^4 - 8x^2 + 16$