

## Answer Key

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### Lesson 5.7

#### Practice Level C

1.  $-3, -1, 3$  2.  $-1, 1, 2 + \sqrt{3}, 2 - \sqrt{3}$

3.  $-2, 0, 2 + i\sqrt{3}, 2 - i\sqrt{3}$  4.  $-4, -2, \frac{5}{2}, 4$

5.  $-3, -1, 3, \frac{9}{2}$  6.  $1, \frac{-3 \pm i\sqrt{19}}{2}$

7.  $-i, i, -1 + \sqrt{2}, -1 - \sqrt{2}$  8.  $1 + 4i, 1 - 4i, \sqrt{3}, -\sqrt{3}$  9.  $f(x) = 2x^4 - 4x^3 - 32x^2 + 64x$

10.  $f(x) = 2x^4 + 58x^2 + 200$

11.  $f(x) = 2x^3 + 10x^2 - 6x - 30$

12.  $f(x) = 2x^3 - 12x^2 + 50x$

13.  $f(x) = 2x^4 - 22x^3 + 80x^2 - 116x + 56$

14.  $f(x) = 2x^6 - 26x^5 + 120x^4 - 200x^3 +$

$118x^2 - 174x$  15. 2 or 0; 1; 2 or 0 16. 2 or 0; 0; 4, 2, or 0 17. 4, 2, or 0; 1; 4, 2, or 0

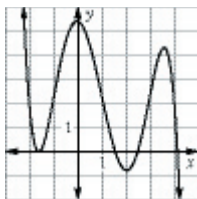
18. 5, 3, or 1; 5, 3, or 1; 8, 6, 4, 2, or 0

19. 3 or 1; 3 or 1; 2 or 0 20.  $-0.75, 0.75$

21.  $-0.86$  22.  $-1.06, 3.98$

23.  $-3.65, 0, 3.11$

24. *Sample answer:* One zero is a repeated zero.;



25. *Sample answer:*  $f(x) = x^3 - 3x^2 - 18x + 40$  and  $g(x) = 2x^3 - 6x^2 - 36x + 80$

26. a.  $R = -315t^5 + 5554t^4 + 1932t^3 - 709,619t^2 + 6,441,145t + 49,246,365$  b. 2001