

Answer Key

Lesson 5.4

Practice Level C

1. $(x - 8)(x^2 + 8x + 64)$
2. $2(a + 6)(a^2 - 6a + 36)$
3. $7(h + 4)(h^2 - 4h + 16)$
4. $-3(c - 2)(c^2 + 2c + 4)$
5. $(6x^2 + 1)(2x - 1)$ 6. $(3k^3 - 7)(k + 9)$
7. $(n + 4)(n - 4)(3n - 10)$
8. $x^3(x + 1)^2(x - 1)$ 9. $(y^2 + 9)(y + 3)(y - 3)$
10. $2(z^2 + 25)(z + 5)(z - 5)$
11. $(3a^2 - 1)(2a^2 + 5)$
12. $(6b^2 + 7)(b + 2)(b - 2)$
13. $(r - 1)(r^2 + r + 1)(r^2 + 1)$
14. $-4w^2(w^2 + 2)(w^2 + 1)(w + 1)(w - 1)$
15. $(a^2b + 5)(a^4b^2 - 5a^2b + 25)$
16. $(c^2 - d^2)(2a - 5b)$ 17. -10 18. $\frac{2}{3}$ 19. 4
20. $-4, -3, 3$ 21. $-\frac{3}{5}, 1$ 22. $-\sqrt{7}, -2, 2, \sqrt{7}$
23. $-\frac{1}{3}, \frac{1}{3}$ 24. $-2, 2$ 25. $-1, 0, 1$
26. $-1, -\frac{3}{4}, \frac{3}{4}, 1$ 27. $-\frac{\sqrt{6}}{2}, 0, \frac{\sqrt{6}}{2}$ 28. $0, \frac{3}{2}$
29. *Sample answer:*
 $x^4 + 5x^3 + x + 5; (x + 5)(x + 1)(x^2 - x + 1)$
30. **a.** $V_1 = 36\pi x^3, V_2 = 16\pi x^3, V_3 = 4\pi x^3$
- b.** $56\pi x^3 = 448\pi$ **c.** 2 **d.** level 1: 12 ft, 2 ft; level 2: 8 ft, 2 ft; level 3: 4 ft, 2 ft