

Answers

5.1 Extra Practice

1. 7
2. no real sixth roots
3. -3
4. 216
5. 8
6. 4
7. -3125
8. $\frac{1}{1024}$
9. $\frac{1}{81}$
10. 0.51
11. 7.42
12. 8869.01
13. 0.07
14. 25.64
15. -12.41
16. $x = \pm 1.78$
17. $x = -2.97$
18. $x = \pm 3$
19. $x = 3.42$
20. $x = \pm 5$
21. $x = -7$
22. 7.6 in.
23. 7 m
24. a. about 0.72 au b. 12 years

5.1 Reteach

1. 5
2. ± 7
3. ± 3
4. 3
5. 2
6. 8
7. 125
8. 100
9. 2
10. $x = \pm 4$
11. $x = 5$
12. $x \approx 12.32, -0.32$
13. $x = 3$
14. $x \approx -2.57$
15. $x \approx \pm 1.57$

5.1 Enrichment and Extension

1. $n = 6$
2. $n = 2$
3. $n = 5$
4. $n = -1$
5. $n = -4$ or $n = 4$
6. $n = 8$
7. $n = -2$
8. no solution
9. $n = 3$
10. $n = -4$
11. $n = -16$
12. $n = \frac{5}{2}$
13. $n = \frac{1}{2}, n = -\frac{3}{2}$
14. $n = 4, n = -1$

Challenge: $a = 1, b = -2,$ and $c = -1$

5.1 Puzzle Time

I WISH YOU WOULD NOT ASK ME THAT I DO NOT KNOW ONE BUG FROM ANOTHER

5.2 Cumulative Practice

1. $x = 3 \pm i$
2. $x = -4 \pm i$

5.2 Prerequisite Skills Practice

1. y^2
2. p^3

5.2 Extra Practice

1. $\frac{1}{2^{3/5}}$
2. 4
3. $11^{1/3}$
4. $9^{2/5}$
5. $3^{3/2}$
6. $5^{4/3}$
7. 25
8. $3\sqrt[5]{2}$
9. 2
10. $\frac{1}{10}$
11. 5
12. 2
13. $\frac{\sqrt[3]{12}}{3}$
14. $\frac{\sqrt[3]{20}}{5}$
15. $\frac{7\sqrt[4]{4}}{2}$
16. $\frac{35 + 7\sqrt{3}}{22}$
17. $\frac{-6\sqrt{2} + 6\sqrt{7}}{5}$
18. $\frac{\sqrt{30} + \sqrt{6}}{12}$
19. $4(25^{2/3})$
20. $-5\sqrt{6}$
21. $8\sqrt[3]{3}$
22. $13\sqrt[5]{2}$
23. $5(3^{1/4})$
24. $13(7^{1/3})$
25. $5x^2y^4$
26. $\frac{2r^2}{p^5}$
27. $\frac{n^2}{p^3}$
28. a. $r = \frac{\sqrt{\pi V}}{3\pi}$
- b. $S = 6\sqrt{\pi V} + \frac{V}{9}$
- c. $(36\sqrt{3\pi} + 12) \text{ m}^2$

5.2 Reteach

1. $7^{1/2}$
2. $14^{3/2}$
3. $\frac{1}{5^{4/5}}$
4. $10^{3/4}$
5. $\frac{3}{2}$
6. $7^{1/2}$
7. $6 \cdot 2^{1/2}$
8. $\frac{1}{225}$
9. 27
10. 15
11. 9
12. $2\sqrt[4]{6}$
13. 3
14. 2
15. $\frac{1}{4}$
16. 5
7. 3
18. $\frac{1}{5}$