

ANSWER PRESENTATION TOOL

Algebra 2 - Student Edit

5

1 - Practice

1-37

ALL EVEN

Show Sol

ODD

1. Because $n = 3$ is odd and $a = 8 > 0$, 8 has one real cube root. Because $2^3 = 8$, you can write $\sqrt[3]{8} = 2$ or $8^{1/3} = 2$.

3. Because $n = 2$ is even and $a = 0$, 0 has one real square root. Because $0^2 = 0$, or you can write $\sqrt{0} = 0$ or $0^{1/2} = 0$.

5. Because $n = 5$ is odd and $a = -32 < 0$, -32 has one real fifth root. Because $(-2)^5 = -32$, you can write $\sqrt[5]{-32} = -2$ or $(-32)^{1/5} = -2$.

$$7. 64^{1/6} = (2^6)^{1/6} = 2$$

$$9. 25^{3/2} = (25^{1/2})^3 = 5^3 = 125$$

$$11. (-243)^{1/5} = [(-3)^5]^{1/5} = -3$$

$$13. 8^{-2/3} = (8^{1/3})^{-2} = 2^{-2} = \frac{1}{2^2} = \frac{1}{4}$$

15. The negative sign was lost.

$$-27^{5/3} = (-27^{1/3})^5 = -3^5 = -243$$

17. B; The denominator of the exponent is 3 and the numerator is 4.

19. A; The denominator of the exponent is 4 and the exponent is negative.

$$21. \sqrt[5]{32,768} = 8$$

$$23. 25^{-1/3} \approx 0.34$$

$$25. 20,736^{4/5} \approx 2840.40$$

$$27. (\sqrt[4]{187})^3 \approx 50.57$$

$$29. x^3 = 125$$

$$x = 5$$

The solution is $x = 5$.

$$31. (x + 10)^5 = 70$$

$$x + 10 \approx 2.33$$

$$x \approx -7.66$$

The solution is

$$x \approx -7.66.$$

$$33. x^5 = -48$$

$$x \approx -2.17$$

The solution is $x \approx -2.17$.

$$35. x^6 + 36 = 100$$

$$x^6 = 64$$

$$x = \pm 2$$

The solutions are

$$x = -2 \text{ and } x = 2.$$

$$37. \frac{1}{3}x^4 = 27$$

$$x^4 = 81$$

$$x = \pm 3$$

The solutions are

$$x = -3 \text{ and } x = 3.$$

