Evaluate.

19. $256^{\frac{1}{4}}$

20. $27^{\frac{4}{3}}$

21. $32^{-\frac{2}{5}}$

22. $64^{\frac{5}{6}}$

23. $36^{\frac{3}{2}}$

$(\sqrt[2]{36})^3$

$(6)^3 = 216$

24. $216^{-\frac{2}{3}}$

$\frac{1}{216^{2/3}}$

$\frac{1}{(\sqrt[3]{216})^2}$

$\frac{1}{(6)^2} = \frac{1}{36}$

Solve each equation.

25. $x^3 = 125$

$\sqrt[3]{x^3} = \sqrt[3]{125}$

$x = \sqrt[3]{125}$

$x = 5$

26. $-2x^4 = -32$

$\frac{-2x^4}{-2} = \frac{-32}{-2}$

$\sqrt[4]{x^4} = \sqrt[4]{16}$

$x = \pm\sqrt[4]{16}$

$x = \pm 2$

27. $\frac{1}{2}x^3 + 6 = 10$

$-6 \quad -6$

$2 \cdot \frac{1}{2}x^3 = 4 \cdot 2$

$\sqrt[3]{x^3} = \sqrt[3]{8}$

$x = 2$

28. $\sqrt[3]{(x+2)^3} = \sqrt[3]{27}$

$x + 2 = 3$

$-2 \quad -2$

$x = 1$

29. $\sqrt[4]{(x-5)^4} = \sqrt[4]{256}$

$x - 5 = \pm 4$

$+5 \quad +5$

$x = 5 \pm 4$

$x = 5 + 4$ $\quad$ $x = 5 - 4$

$x = 9$ $\quad$ $x = 1$

30. $-x^5 + 3 = 35$

$-3 \quad -3$

$\frac{-1x^5}{-1} = \frac{32}{-1}$

$\sqrt[5]{x^5} = \sqrt[5]{-32}$

$x = -2$