

Simplify the following. All letters denote positive real numbers.

06-12-13-11-MKN

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|----|---|----|---|
| 1 | $\sqrt{25}$ | 2 | $\sqrt[5]{-32}$ |
| 3 | $\sqrt[3]{-64}$ | 4 | $\sqrt[4]{625}$ |
| 5 | $\sqrt[3]{256}$ | 6 | $\sqrt[3]{10,000}$ |
| 7 | $\sqrt[3]{\frac{1}{3}}$ | 8 | $\sqrt{\frac{1}{5}}$ |
| 9 | $\sqrt{4a^4b^{-8}}$ | 10 | $\sqrt[3]{-8a^3b^{-9}}$ |
| 11 | $\sqrt[3]{8x^3y^{-6}}$ | 12 | $\sqrt[4]{\frac{16v^9}{u^{12}}}$ |
| 13 | $\sqrt[3]{x^{-6}y^9}$ | 14 | $\sqrt[5]{-32y^5x^{-10}}$ |
| 15 | $\sqrt{\frac{50x^6y^{10}}{z^2}}$ | 16 | $\sqrt{\frac{3\sqrt{-27x^7}}{y^9}}$ |
| 17 | $\sqrt{\frac{1}{2xy^3}}$ | 18 | $\sqrt{\frac{3c^2}{d}} \sqrt{\frac{6d^3}{c^2}}$ |
| 19 | $\sqrt{3u^5v^3} \sqrt{4u^{-1}v}$ | 20 | $\sqrt[5]{16x^3y^4} \sqrt[5]{-2x^4y}$ |
| 21 | $\sqrt[4]{(3a^5b^{-1}c^3)^4}$ | 22 | $\sqrt[3]{16x\sqrt{16x^4}}$ |
| 23 | $(\sqrt[3]{-2x^2y})^3$ | 24 | $\sqrt[10]{(a+b)^{10}}$ |
| 25 | $\frac{\sqrt[3]{-81x^5y^{-4}}}{\sqrt[3]{3x^2y}}$ | 26 | $\sqrt[3]{\frac{1}{x}}$ |
| 27 | $\frac{1}{\sqrt{a}}$ | 28 | $(\sqrt{x})^6$ |
| 29 | $\sqrt[3]{\frac{16a^4}{3b}}$ | 30 | $\sqrt{\frac{27a^8b}{c^3d^4}}$ |
| 31 | $\sqrt[3]{(x^7y^{-2}z)^3}$ | 32 | $(\sqrt[3]{-2x^3y})^4$ |
| 33 | $\sqrt{2x^3y} \sqrt{6x^2y^3}$ | 34 | $\sqrt[4]{8u^2v^3} \sqrt[4]{4u^3v^2}$ |
| 35 | $\frac{\sqrt[3]{-250x^{-4}y}}{\sqrt[3]{x^2y^{-3}}}$ | 36 | $\sqrt{\frac{x}{y}} \div \sqrt{\frac{y}{x}}$ |
| 37 | $\sqrt[3]{\sqrt{x^6y^9}}$ | 38 | $\sqrt[3]{4x^2\sqrt[3]{8x^6}}$ |
| 39 | $\frac{1}{\sqrt{x^3}}$ | 40 | $\frac{1}{\sqrt{x+1}}$ |
| 41 | $\frac{1}{a+\sqrt{b}}$ | 42 | $\frac{\sqrt{a}-\sqrt{b}}{\sqrt{a}+\sqrt{b}}$ |
| 43 | $\frac{\sqrt{x}}{\sqrt{x}+1}$ | 44 | $\frac{\sqrt{x}+\sqrt{x^3}}{\sqrt{x}}$ |
| 45 | $\sqrt{(x-y)^2}$ | 46 | $\sqrt[3]{(x-y)^3}$ |

Answers

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|----|-----------------------------|----|-------------------------|----|--------------------------|----|------------------------------|---|--------------|----|------------|
| 1 | 5. | 3 | -4. | 5 | 2. | 7 | $(\frac{1}{3})\sqrt[3]{9}$. | 9 | $2a^2/b^4$. | 11 | $2x/y^2$. |
| 13 | y^3/x^2 . | 15 | $(5x^3y^3/z)\sqrt{2}$. | 17 | $(1/2xy^2)\sqrt{2xy}$. | 19 | $2u^2v^2\sqrt{3}$. | | | | |
| 21 | $3a^5c^3/b$. | 23 | $-2x^2y$. | 25 | $-3x\sqrt[3]{y/y^2}$. | 27 | $(1/a)\sqrt{a}$. | | | | |
| 29 | $(2a/3b)\sqrt[3]{18ab^2}$. | 31 | x^7z/y^2 . | 33 | $2x^2y^2\sqrt{3x}$. | 35 | $(-5y/x^2)\sqrt[3]{2y}$. | | | | |
| 37 | $xy\sqrt{y}$. | 39 | \sqrt{x}/x^2 . | 41 | $(a-\sqrt{b})/(a^2-b)$. | 43 | $(x-\sqrt{x})/(x-1)$. | | | | |
| 45 | $ x-y $. | 47 | $2\sqrt{5}$. | 49 | $(2x^2-x+4)\sqrt{x}$. | | | | | | |