

10.3  
#7)

$\sqrt[3]{54xy^5} \cdot \sqrt[3]{4x^2y}$

$\sqrt[3]{54 \cdot 4 x^3 y^6}$

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$\sqrt[3]{27 \cdot 2 \cdot x \cdot (y^5)^3 \cdot y^3} \cdot \sqrt[3]{4x^2y}$

$\sqrt[3]{(3)^3 \cdot 2 \cdot x \cdot (y)^3 y^3}$

$3y \sqrt[3]{2 \cdot x \cdot y^2} \cdot \sqrt[3]{4x^2y}$

$3y \sqrt[3]{8 \cdot x^3 \cdot y^3}$

$3y \sqrt[3]{(2)^3 \cdot (x)^3 \cdot (y)^3}$

$3y(2)(x)(y)$

$6xy^2$

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$\sqrt[3]{54xy^5} \cdot \sqrt[3]{4x^2y}$

$\sqrt[3]{216x^3y^6}$

$\sqrt[3]{(6)^3 \cdot (x)^3 \cdot (y^2)^3}$

$6xy^2$

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#16)

$\sqrt{x^3} \cdot \sqrt[3]{x^2} \cdot \sqrt[6]{x^5}$

$x^{3/2} \cdot x^{2/3} \cdot x^{5/6}$

$\frac{3}{2} + \frac{2}{3} + \frac{5}{6} = \frac{9+4+5}{6} = \frac{18}{6} = 3$

$x^3$

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#13)

$\frac{\sqrt[4]{625x^6}}{\sqrt[4]{2401y^2}}$

$\sqrt[4]{\frac{625x^6y^2}{2401}}$

$\sqrt[4]{\frac{(5)^4 \cdot (x)^2 \cdot x^2 \cdot y^2}{(7)^4}}$

$\frac{5x}{7} \sqrt[4]{x^2y^2}$

$\frac{5x \sqrt[4]{x^2y^2}}{7}$

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