

Directions – Simplify each problem completely. Rationalize where it applies. Must show work!!

1.) $\sqrt{12x^3y^4}$	2.) $\sqrt[3]{135a^5b^3}$	3.) $\sqrt{8x^5y} \cdot \sqrt{5x^4y^3}$	4.) $\frac{\sqrt[3]{56x^5y^4}}{\sqrt[3]{7x^3y}}$
5.) $\sqrt{\frac{15x^5}{5x^6}}$	6.) $\sqrt[4]{256x^7y^{12}}$	7.) $4\sqrt{2xy^5} \cdot 3\sqrt{8xy}$	8.) $\sqrt[3]{-9x^2y^4} \cdot \sqrt[3]{12xy}$
9.) $\frac{\sqrt{54a^5b^3}}{\sqrt{2a^2b}}$	10.) $\sqrt[3]{81x^5y^4} \cdot \sqrt[4]{32x^3y}$	11.) $\frac{5x}{\sqrt{25x^3}}$	12.) $2\sqrt[3]{2xy^2} \cdot \sqrt[3]{4x^2y^5}$
13.) $\frac{\sqrt{3xy^2}}{\sqrt{5xy^3}}$	14.) $\sqrt{200a^6b^7}$	15.) $\frac{\sqrt{20ab}}{\sqrt{45a^2b^3}}$	16.) $4\sqrt{2x} \cdot 5\sqrt{6xy^2}$
17.) $\frac{6\sqrt{2x}}{4\sqrt{3}}$	18.) $\sqrt[3]{-16a^{12}b^8}$	19.) $\sqrt[3]{50x^2y^5} \cdot \sqrt[3]{15x^3y}$	20.) $\sqrt[3]{\frac{4y^2}{12y}}$