Simplify each radical expression completely.

1. $\sqrt[3]{125a^{9}b^{3}c^{6}}$
2. $\sqrt{45x^{4}y^{3}z^{7}}$
3. $\sqrt{3x^{3} }$ $∙\sqrt{12x}$
4. $\sqrt[4]{8p^{3}q^{8}} ∙$ $\sqrt[4]{4p^{6}q^{4}}$
5. $\frac{\sqrt[3]{648m^{20}n^{6}}}{\sqrt[3]{3m^{5}n^{3}}}$
6. $\frac{\sqrt{240x^{7}y^{9}}}{\sqrt{5x^{4}y}}$

Simplify the following expressions. Write the final answer using only positive exponents.

1. ($4a^{3}b^{2})(4a^{2}b^{5})$
2. $(-2y^{3}z)^{3}$
3. $\frac{3xy^{2}z^{4}}{9x^{2}yz^{2}}$
4. $\frac{(a^{2}b^{5})^{2}}{a^{3}b^{4}}$
5. $(\frac{7t}{t^{3}})^{-2}$
6. $\frac{18^{-1}u^{-4}w^{-2}}{6^{-1}u^{-6}w}$
7. $(\frac{8x^{-4}y^{3}}{4x^{-3}y^{3}})^{-3}(xy^{2})^{2}$