Simplify each. Use absolute value symbols when needed.

1. $\sqrt[5]{m^{20}q^{35}}$ m^4q^7
2. $\sqrt[4]{a^{12}b^{32}}$ $|a^3|b^8$
3. $\sqrt[8]{x^{40}y^{21}z^{15}}$ $|x^5|y^2\sqrt[8]{y^5z^7}$
4. $\sqrt[9]{k^{41}j^{29}}$ $k^4j^3\sqrt[9]{k^5j^2}$

Simplify. Use absolute value symbols when needed.

$\sqrt{25c^{14}d^{29}} = 5|c^7|d^{14}\sqrt{d}$

Simplify. Assume all variables are positive.

$\sqrt[4]{m^{12}n^{23}p^6} = m^3n^5p\sqrt[4]{n^3p^2}$

this is a way of telling you NOT to use absolute value symbols.

? $= b^8c^5d^{11}\sqrt[3]{c^2d}$

What was the original problem that produced the answer shown above?

$= \sqrt[3]{b^{24}c^{17}d^{34}}$

Simplify each.

1. $8^{\frac{7}{3}}$ $\sqrt[3]{8^7}$ or $(\sqrt[3]{8})^7$ $(2)^7$ $= 128$
2. $32^{-\frac{3}{5}}$ $\frac{1}{32^{3/5}}$ $\frac{1}{\sqrt[5]{32^3}}$ or $\frac{1}{(\sqrt[5]{32})^3}$ $\frac{1}{2^3}$ $\frac{1}{8}$