Steps to Simplify a Fraction with Square Root Over Square Root
1. Write original problem.
2. Put one $\sqrt{}$ over the entire fraction.
3. Follow steps to simplify a square root of a fraction.

Simplify

$$\frac{\sqrt{100}}{\sqrt{144}} = \sqrt{\frac{100}{144}}$$

$$= \sqrt{\frac{\cancel{2} \cdot 2 \cdot 5 \cdot 5}{\cancel{2} \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3}}$$

$$= \sqrt{\frac{5 \cdot 5}{2 \cdot 2 \cdot 3 \cdot 3}}$$

$$= \sqrt{\frac{25}{36}}$$

$$= \frac{\sqrt{25}}{\sqrt{36}}$$

$$= \frac{5}{6}$$