

Rationalizing the Denominator

Quotient Property of Square roots

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

Note: You can never have a radical in the denominator!!!
(you have to rationalize the denominator if you can't simplify!)

Rationalizing the Denominator

$$\sqrt{\frac{72}{9}}$$

$$\frac{\sqrt{72}}{\sqrt{9}}$$

$$\frac{\sqrt{36}\sqrt{2}}{3}$$

$$\frac{\overset{2}{\cancel{6}}\sqrt{2}}{\cancel{3}_1}$$

$$(2\sqrt{2})$$

Rationalizing the Denominator

$$\sqrt{\frac{4}{5}}$$

$$\frac{\sqrt{4}}{\sqrt{5}}$$

$$\frac{2}{\sqrt{5}}$$

↑
can't have radical
in denominator

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

Rationalize
the
denominator

$$\frac{2\sqrt{5}}{\sqrt{25}}$$

$$\frac{2\sqrt{5}}{5}$$

Rationalizing the Denominator

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

$$\frac{\sqrt{6}}{2\sqrt{9}}$$

$$\frac{\sqrt{6}}{2 \cdot 3}$$

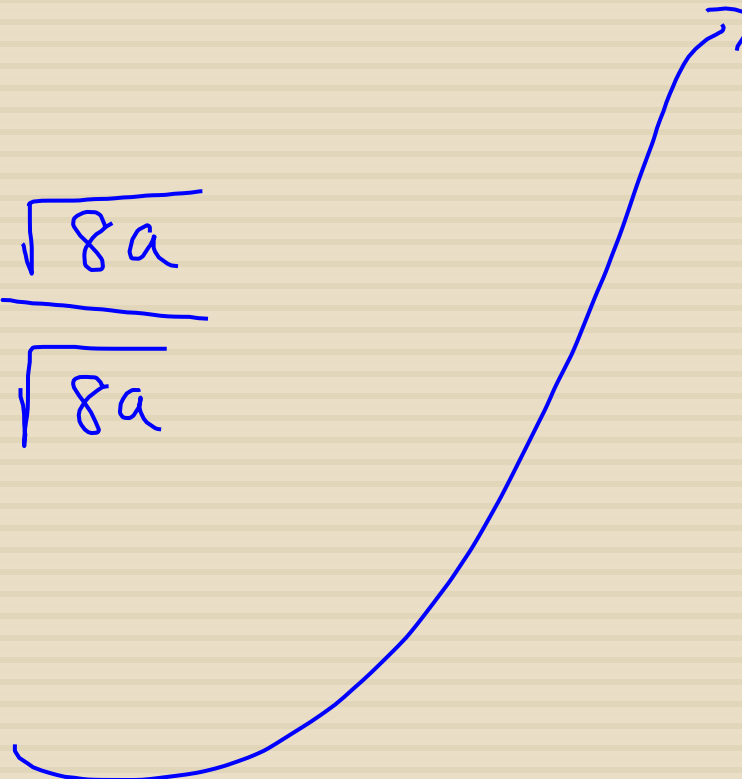
$$= \left(\frac{\sqrt{6}}{6} \right)$$

Rationalizing the Denominator

$$\sqrt{\frac{3}{8a}}$$

$$\frac{\sqrt{3}}{\sqrt{8a}} \cdot \frac{\sqrt{8a}}{\sqrt{8a}}$$

$$\frac{\sqrt{24a}}{\sqrt{64a^2}}$$


$$\frac{\sqrt{4}\sqrt{6}\sqrt{a}}{8a}$$
$$\frac{2\sqrt{6a}}{\cancel{8a}^4}$$

$$\frac{\sqrt{6a}}{4a}$$

HOMEWORK



□ **Worksheet – both sides**