

SQUARE ROOT PROPERTY

IF

$$P^2 = Q$$

THEN

$$P = \pm \sqrt{Q}$$

1. $X = yz^2$ For z

$$\frac{X}{y} = \frac{yz^2}{y}$$

$$\frac{X}{y} = z^2$$

(SRP)

$$\pm \sqrt{\frac{X}{y}} = z$$

$$z = \pm \frac{\sqrt{X}}{\sqrt{y}}$$

$$z = \pm \frac{\sqrt{X}}{\sqrt{y}} \cdot \frac{\sqrt{y}}{\sqrt{y}}$$

$$z = \pm \frac{\sqrt{xy}}{y}$$

2. $A = \frac{BC^3}{D^2}$ For D

$$AD^2 = \cancel{D^2} \left(\frac{BC^3}{\cancel{D^2}} \right)$$

$$AD^2 = BC^3$$

$$\frac{AD^2}{A} = \frac{BC^3}{A}$$

$$D^2 = \frac{BC^3}{A}$$

(SRP)

$$D = \pm \sqrt{\frac{BC^3}{A}}$$

$$D = \pm \frac{\sqrt{BC^3}}{\sqrt{A}}$$

$$D = \pm \frac{\sqrt{BC^3}}{\sqrt{A}} \cdot \frac{\sqrt{A}}{\sqrt{A}}$$

$$D = \pm \frac{\sqrt{ABC^3}}{A}$$

$$D = \pm \frac{\sqrt{ABC^3}}{A}$$

$$D = \pm \frac{C\sqrt{AB}}{A}$$

3. $A = B(C^2 - D^2)$ For D

$$A = BC^2 - BD^2$$

$$BD^2 = BC^2 - A$$

$$\frac{BD^2}{B} = \frac{BC^2 - A}{B}$$

$$D^2 = \frac{BC^2 - A}{B}$$

$$D = \pm \sqrt{\frac{BC^2 - A}{B}}$$

$$D = \pm \frac{\sqrt{BC^2 - A}}{\sqrt{B}}$$

$$D = \pm \frac{\sqrt{BC^2 - A}}{\sqrt{B}} \cdot \frac{\sqrt{B}}{\sqrt{B}}$$

$$D = \pm \frac{\sqrt{B(BC^2 - A)}}{B}$$

$$D = \pm \frac{\sqrt{B^2 C^2 - AB}}{B}$$