MATH 0482
Chapter 1.3 Square and Cube Roots of Real Numbers

SQUARE ROOT $\sqrt{}$

$\sqrt{a^2} = a \quad a \geq 0$

FIND THE FOLLOWING.

$\sqrt{121}$

$\sqrt{0.25}$

$\sqrt{\frac{4}{9}}$

$-\sqrt{64}$

$-\sqrt{1}$

$4 < 5 < 9$

 $\rightarrow \sqrt{5} \approx$

$\sqrt{-9} =$

Cube Root $\sqrt[3]{\ }$

$\sqrt[3]{a^3} = a$

FIND THE FOLLOWING.

$\sqrt[3]{125}$

$\sqrt[3]{0}$

$\sqrt[3]{\frac{8}{27}}$

$\sqrt[3]{-27}$

$\sqrt[3]{-1}$

 $\sqrt[3]{2}$

Simplifying Square and Cube Roots

Product Rule: $\sqrt[N]{AB} = \sqrt[N]{A} \cdot \sqrt[N]{B}$

Quotient Rule: $\sqrt[N]{\frac{A}{B}} = \frac{\sqrt[N]{A}}{\sqrt[N]{B}}$

Simplify $\sqrt{12}$.

Simplify $\sqrt{135}$.

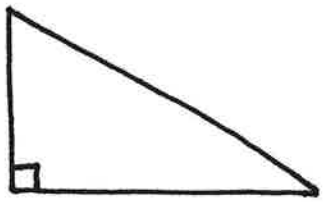
Simplify $\sqrt{\frac{108}{169}}$.

Simplify $-5\sqrt{162}$.

Simplify $\sqrt[3]{162}$.

Simplify $\sqrt[3]{-\frac{16}{343}}$.

Pythagorean Theorem



Calculate the diagonal of a square with sides measuring 5 m.

A triangle has sides 1 cm, 2 cm, and $\sqrt{5}$ cm.
Is it a right triangle?