8th Grade Test Study Guide

Exponents and Roots

9^2

3^3

$\sqrt{64}$

$\sqrt[3]{8}$

Use the exponent rules to rewrite each expression as a single **positive** exponent
$13^6 \cdot 13^7$

$12^{-3} \div 12^{-10}$

$(8^3)^4$

Scientific Notation and Operations in Scientific Notation

Convert to Scientific Notation

35,000,000

0.00000987

Convert to Standard Notation

4.87×10^5

8.9×10^{-6}

Perform the following operation and express the answer in Scientific Notation

$(6.0 \times 10^3) \times (1.5 \times 10^{-2})$

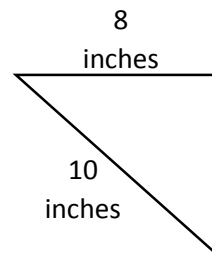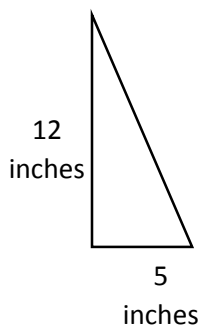$$\frac{7.8 \times 10^4}{1.2 \times 10^2}$$

Solving Equations

$5x + 15 = 30$

$\frac{x}{3} - 5 = 2$

Pythagorean Theorem

Write the equation for the Pythagorean Theorem and define the variables

Find the length of the missing side

12
inches

5
inches

8
inches

10
inches

A plane leaves Bentonville and travels 7 miles due north. It then turns and travels 24 miles due west. From the planes current location what is the distance of the shortest route back to Bentonville?