

Information Not Given on the Formulas Page (but you need to know it for the test!)

Quadratic Formula

$$ax^2 + bx + c = 0, \quad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Exponent Rules

Most important: $x^0 = 1$

$$x^1 = x \quad x^a x^b = x^{a+b} \quad \frac{x^a}{x^b} = x^{a-b} \quad (x^a)^b = x^{ab}$$

Often utilized on the hardest problems:

$$x^{-a} = \frac{1}{x^a}$$

$$x^{\frac{a}{b}} = \sqrt[b]{x^a}$$

Trig functions: sine, cosine, and tangent

SOH

$$\sin x^\circ = \frac{\text{Opposite}}{\text{Hypotenuse}}$$

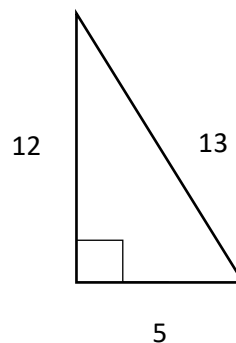
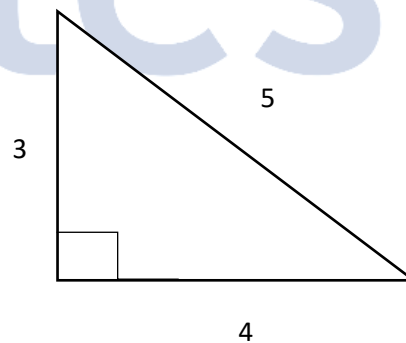
CAH

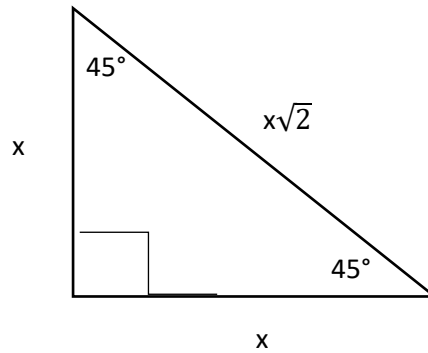
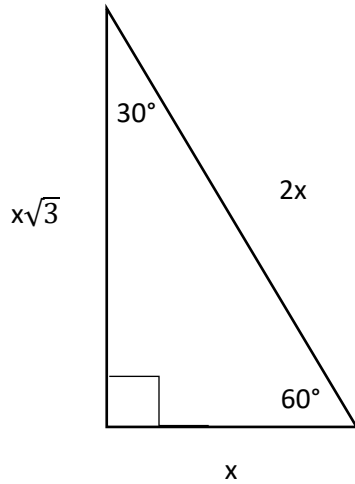
$$\cos x^\circ = \frac{\text{Adjacent}}{\text{Hypotenuse}}$$

TOA

$$\tan x^\circ = \frac{\text{Opposite}}{\text{Adjacent}}$$

Pythagorean Triples





Pythagorean Identity

$$\sin x^\circ = \cos (90 - x)^\circ$$

Equation for Graphing a Circle

For a circle with center (h, k) , the equation for graphing that circle is:

$$(x - h)^2 + (y - k)^2 = \text{Radius}^2$$

Attest