Math Notes

K

March 6, 2020

Contents

1 Right Triangle Properites

1.1 Pythagorean Theorem

$$a^2 + b^2 = c^2$$

1.2 Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

1.3 Trigonometric Functions

$$sin(\theta) = \frac{Opposite}{Hypotenuse} = \frac{y}{1} = y \qquad cos(\theta) = \frac{Adjacent}{Hypotenuse} = \frac{x}{1} = x \qquad tan(\theta) = \frac{Opposite}{Adjacent} = \frac{y}{x} = \frac{sin(\theta)}{cos(\theta)}$$

$$sec(\theta) = \frac{1}{sin(\theta)} \qquad csc(\theta) = \frac{1}{cos(\theta)} \qquad cot(\theta) = \frac{cos(\theta)}{sin(\theta)}$$

2 1 Dimensional Motion

$$v_f = v + at$$
$$s_f = s_i v_i t + \frac{1}{2}at^2$$

2.1 Kinematic Equations

$$v = v_0 + at$$
$$\Delta x = \left(\frac{v + v_0}{2}\right)$$
$$\Delta x = v_0 t + \frac{1}{2}at^2$$
$$v^2 = v_0^2 + 2a\Delta x$$

3 Constants

Source: https://session.masteringphysics.com/bookAsset/knight4/constantsPage