Math Notes

K

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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

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

$$= \frac{y}{1} = y \qquad\qquad\qquad = \frac{x}{1} = x \qquad\qquad\qquad = \frac{y}{x}$$

$$= \frac{sin(\theta)}{cos(\theta)}$$

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

2 1 Dimensional Motion

$$v_f = v + at$$

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

2.1 Kinematic Equations

$$v = v_0 + at$$

$$\Delta x = \left(\frac{v + v_0}{2}\right)$$

$$\Delta x = v_0 t + \frac{1}{2}at^2$$

$$v^2 = v_0^2 + 2a\Delta x$$