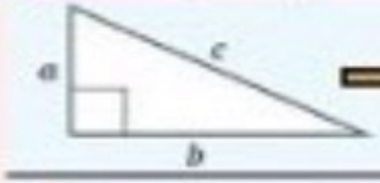
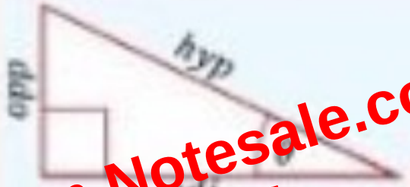
Area Formulae

Pythagoras and Trigonometry formulae



$$Pythagoras \rightarrow \quad c^2 = a^2 + b^2$$



SohCahToa

$$sin\theta = \frac{opposite}{hypotenuse}$$

$$cos\theta = \frac{adjacent}{hypotenuse}$$

$$tan\theta = \frac{opposite}{adjacent}$$

The Sine rule formula

Missing length

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Missing angle

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

The Cosine rule formula

Missing length

$$a^2 = b^2 + c^2 - 2bc\cos A$$

Missing angle

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

Simple interest

Interest ⇨ Principal × Rate × Years

Compound Growth and Decay

Interest ⇨ Principal × (1 ± Rate) Years

Growth (+)

Decay (−)

The Quadratic equation

Used for solutions of $ax^2 + bx + c = 0$

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

Volume

$$Prism = Area\ of\ face \times depth$$

$$Pyramid = \frac{Area\ of\ base \times height}{3}$$

Compound measures

$$Density = \frac{Mass}{Volume}$$

$$Speed = \frac{Distance}{Time}$$

$$Pressure = \frac{Force}{Area}$$