

Important Formulas of Right Angled Triangle PDF



Formulas Examples with Units

List of 14 Important Formulas of Right Angled Triangle

1) Altitude of Right Angled Triangle Formula ↻

Formula

$$h' = \frac{h \cdot B}{\sqrt{h^2 + B^2}}$$

Example with Units

$$7.0588\text{m} = \frac{8\text{m} \cdot 15\text{m}}{\sqrt{8\text{m}^2 + 15\text{m}^2}}$$

Evaluate Formula ↻

2) Area of Right Angled Triangle Formula ↻

Formula

$$A = \frac{B \cdot h}{2}$$

Example with Units

$$60\text{m}^2 = \frac{15\text{m} \cdot 8\text{m}}{2}$$

Evaluate Formula ↻

3) Base of Right Angled Triangle Formula ↻

Formula

$$B = \sqrt{H^2 - h^2}$$

Example with Units

$$15\text{m} = \sqrt{17\text{m}^2 - 8\text{m}^2}$$

Evaluate Formula ↻

4) Circumradius of Right Angled Triangle Formula ↻

Formula

$$r_c = \frac{H}{2}$$

Example with Units

$$8.5\text{m} = \frac{17\text{m}}{2}$$

Evaluate Formula ↻

5) Circumradius of Right Angled Triangle given Sides Formula ↻

Formula

$$r_c = \frac{\sqrt{h^2 + B^2}}{2}$$

Example with Units

$$8.5\text{m} = \frac{\sqrt{8\text{m}^2 + 15\text{m}^2}}{2}$$

Evaluate Formula ↻

6) Height of Right Angled Triangle Formula ↻

Formula

$$h = \sqrt{H^2 - B^2}$$

Example with Units

$$8\text{m} = \sqrt{17\text{m}^2 - 15\text{m}^2}$$

Evaluate Formula ↻



7) Hypotenuse of Right Angled Triangle Formula

Formula

$$H = \sqrt{h^2 + B^2}$$

Example with Units

$$17_m = \sqrt{8_m^2 + 15_m^2}$$

Evaluate Formula 

8) Inradius of Right Angled Triangle Formula

Formula

$$r_i = \frac{h + B - \sqrt{h^2 + B^2}}{2}$$

Example with Units

$$3_m = \frac{8_m + 15_m - \sqrt{8_m^2 + 15_m^2}}{2}$$

Evaluate Formula 

9) Median Line on Base of Right Angled Triangle Formula

Formula

$$M_B = \frac{\sqrt{2 \cdot (2 \cdot h^2 + B^2) - B^2}}{2}$$

Example with Units

$$10.9659_m = \frac{\sqrt{2 \cdot (2 \cdot 8_m^2 + 15_m^2) - 15_m^2}}{2}$$

Evaluate Formula 

10) Median Line on Height of Right Angled Triangle Formula

Formula

$$M_h = \frac{\sqrt{2 \cdot (2 \cdot B^2 + h^2) - h^2}}{2}$$

Example with Units

$$15.5242_m = \frac{\sqrt{2 \cdot (2 \cdot 15_m^2 + 8_m^2) - 8_m^2}}{2}$$

Evaluate Formula 

11) Median Line on Hypotenuse of Right Angled Triangle Formula

Formula

$$M_H = \frac{\sqrt{2 \cdot (h^2 + B^2) - h^2 - B^2}}{2}$$

Example with Units

$$8.5_m = \frac{\sqrt{2 \cdot (8_m^2 + 15_m^2) - 8_m^2 - 15_m^2}}{2}$$

Evaluate Formula 

12) Perimeter of Right Angled Triangle Formula

Formula

$$P = h + B + \sqrt{h^2 + B^2}$$

Example with Units

$$40_m = 8_m + 15_m + \sqrt{8_m^2 + 15_m^2}$$

Evaluate Formula 

13) Perimeter of Right Angled Triangle given Hypotenuse, Circumradius and Inradius Formula

Formula

$$P = 2 \cdot r_i + H + 2 \cdot r_c$$

Example with Units

$$41_m = 2 \cdot 3_m + 17_m + 2 \cdot 9_m$$

Evaluate Formula 

14) Perimeter of Right Angled Triangle given Sides Formula

Formula

$$P = h + B + H$$

Example with Units

$$40_m = 8_m + 15_m + 17_m$$

Evaluate Formula 



Variables used in list of Important Formulas of Right Angled Triangle above

- **A** Area of Right Angled Triangle (Square Meter)
- **B** Base of Right Angled Triangle (Meter)
- **h** Height of Right Angled Triangle (Meter)
- **h'** Altitude of Right Angled Triangle (Meter)
- **H** Hypotenuse of Right Angled Triangle (Meter)
- **M_B** Median on Base of Right Angled Triangle (Meter)
- **M_h** Median on Height of Right Angled Triangle (Meter)
- **M_H** Median on Hypotenuse of Right Angled Triangle (Meter)
- **P** Perimeter of Right Angled Triangle (Meter)
- **r_c** Circumradius of Right Angled Triangle (Meter)
- **r_i** Inradius of Right Angled Triangle (Meter)

Constants, Functions, Measurements used in list of Important Formulas of Right Angled Triangle above

- **Functions:** **sqrt**, `sqrt(Number)`
A square root function is a function that takes a non-negative number as an input and returns the square root of the given input number.
- **Measurement:** **Length** in Meter (m)
Length Unit Conversion 
- **Measurement:** **Area** in Square Meter (m²)
Area Unit Conversion 



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