

Important Formulas of Equilateral Triangle PDF



Formulas Examples with Units

List of 13 Important Formulas of Equilateral Triangle

1) Area of Equilateral Triangle Formula ↻

Formula

$$A = \frac{\sqrt{3}}{4} \cdot l_e^2$$

Example with Units

$$27.7128 \text{ m}^2 = \frac{\sqrt{3}}{4} \cdot 8 \text{ m}^2$$

Evaluate Formula ↻

2) Circumradius of Equilateral Triangle Formula ↻

Formula

$$r_c = \frac{l_e}{\sqrt{3}}$$

Example with Units

$$4.6188 \text{ m} = \frac{8 \text{ m}}{\sqrt{3}}$$

Evaluate Formula ↻

3) Edge Length of Equilateral Triangle given Circumradius Formula ↻

Formula

$$l_e = \sqrt{3} \cdot r_c$$

Example with Units

$$8.6603 \text{ m} = \sqrt{3} \cdot 5 \text{ m}$$

Evaluate Formula ↻

4) Edge Length of Equilateral Triangle given Height Formula ↻

Formula

$$l_e = \frac{2 \cdot h}{\sqrt{3}}$$

Example with Units

$$8.0829 \text{ m} = \frac{2 \cdot 7 \text{ m}}{\sqrt{3}}$$

Evaluate Formula ↻

5) Exradius of Equilateral Triangle Formula ↻

Formula

$$r_e = \frac{\sqrt{3}}{2} \cdot l_e$$

Example with Units

$$6.9282 \text{ m} = \frac{\sqrt{3}}{2} \cdot 8 \text{ m}$$

Evaluate Formula ↻

6) Height of Equilateral Triangle Formula ↻

Formula

$$h = \frac{\sqrt{3}}{2} \cdot l_e$$

Example with Units

$$6.9282 \text{ m} = \frac{\sqrt{3}}{2} \cdot 8 \text{ m}$$

Evaluate Formula ↻

7) Height of Equilateral Triangle given Inradius Formula ↻

Formula

$$h = 3 \cdot r_i$$

Example with Units

$$6 \text{ m} = 3 \cdot 2 \text{ m}$$

Evaluate Formula ↻



8) Inradius of Equilateral Triangle Formula ↻

Formula

$$r_i = \frac{l_e}{2 \cdot \sqrt{3}}$$

Example with Units

$$2.3094_m = \frac{8_m}{2 \cdot \sqrt{3}}$$

Evaluate Formula ↻

9) Length of Angle Bisector of Equilateral Triangle Formula ↻

Formula

$$l_{\text{Angle Bisector}} = \frac{\sqrt{3}}{2} \cdot l_e$$

Example with Units

$$6.9282_m = \frac{\sqrt{3}}{2} \cdot 8_m$$

Evaluate Formula ↻

10) Median of Equilateral Triangle Formula ↻

Formula

$$M = \frac{\sqrt{3} \cdot l_e}{2}$$

Example with Units

$$6.9282_m = \frac{\sqrt{3} \cdot 8_m}{2}$$

Evaluate Formula ↻

11) Perimeter of Equilateral Triangle Formula ↻

Formula

$$P = 3 \cdot l_e$$

Example with Units

$$24_m = 3 \cdot 8_m$$

Evaluate Formula ↻

12) Semiperimeter of Equilateral Triangle Formula ↻

Formula

$$s = \frac{3 \cdot l_e}{2}$$

Example with Units

$$12_m = \frac{3 \cdot 8_m}{2}$$

Evaluate Formula ↻

13) Semiperimeter of Equilateral Triangle given Circumradius Formula ↻

Formula

$$s = \frac{3 \cdot \sqrt{3}}{2} \cdot r_c$$

Example with Units

$$12.9904_m = \frac{3 \cdot \sqrt{3}}{2} \cdot 5_m$$

Evaluate Formula ↻



Variables used in list of Important Formulas of Equilateral Triangle above

- **A** Area of Equilateral Triangle (Square Meter)
- **h** Height of Equilateral Triangle (Meter)
- **l_{Angle Bisector}** Length of Angle Bisector of Equilateral Triangle (Meter)
- **l_e** Edge Length of Equilateral Triangle (Meter)
- **M** Median of Equilateral Triangle (Meter)
- **P** Perimeter of Equilateral Triangle (Meter)
- **r_c** Circumradius of Equilateral Triangle (Meter)
- **r_e** Exradius of Equilateral Triangle (Meter)
- **r_i** Inradius of Equilateral Triangle (Meter)
- **S** Semiperimeter of Equilateral Triangle (Meter)

Constants, Functions, Measurements used in list of Important Formulas of Equilateral 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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