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# Important Formulas of Equilateral Triangle

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# List of 13 Important Formulas of Equilateral Triangle

## Important Formulas of Equilateral Triangle ↗

### 1) Area of Equilateral Triangle ↗

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

[Open Calculator ↗](#)

$$\text{ex } 27.71281\text{m}^2 = \frac{\sqrt{3}}{4} \cdot (8\text{m})^2$$

### 2) Circumradius of Equilateral Triangle ↗

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

[Open Calculator ↗](#)

$$\text{ex } 4.618802\text{m} = \frac{8\text{m}}{\sqrt{3}}$$


### 3) Edge Length of Equilateral Triangle given Circumradius ↗

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

[Open Calculator ↗](#)

$$\text{ex } 8.660254\text{m} = \sqrt{3} \cdot 5\text{m}$$



4) Edge Length of Equilateral Triangle given Height 

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

[Open Calculator !\[\]\(cbe80b694ebd74fcfe136a095b608235\_img.jpg\)](#)

$$ex \quad 8.082904m = \frac{2 \cdot 7m}{\sqrt{3}}$$

5) Exradius of Equilateral Triangle 

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

[Open Calculator !\[\]\(3e2231b1ad3ca8da8658228c00dd08e0\_img.jpg\)](#)

$$ex \quad 6.928203m = \frac{\sqrt{3}}{2} \cdot 8m$$

6) Height of Equilateral Triangle 

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

[Open Calculator !\[\]\(0d5ec72f61334709c3fc9450209b754f\_img.jpg\)](#)

$$ex \quad 6.928203m = \frac{\sqrt{3}}{2} \cdot 8m$$

7) Height of Equilateral Triangle given Inradius 

$$fx \quad h = 3 \cdot r_i$$

[Open Calculator !\[\]\(b64b40baaee5acddc1eab8538ba84754\_img.jpg\)](#)

$$ex \quad 6m = 3 \cdot 2m$$



8) Inradius of Equilateral Triangle 

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

[Open Calculator !\[\]\(e78f798d4ea5c530c9db49e7d26e6b95\_img.jpg\)](#)

$$ex \quad 2.309401m = \frac{8m}{2 \cdot \sqrt{3}}$$

9) Length of Angle Bisector of Equilateral Triangle 

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

[Open Calculator !\[\]\(05be7c7a8995decd503647c99211f7c2\_img.jpg\)](#)


$$ex \quad 6.928203m = \frac{\sqrt{3}}{2} \cdot 8m$$

10) Median of Equilateral Triangle 

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

[Open Calculator !\[\]\(fe3aebe81acea8d45108cd2768939da7\_img.jpg\)](#)

$$ex \quad 6.928203m = \frac{\sqrt{3} \cdot 8m}{2}$$

11) Perimeter of Equilateral Triangle 

$$fx \quad P = 3 \cdot l_e$$

[Open Calculator !\[\]\(899d8b7697d64725bf017d3296cfcf1b\_img.jpg\)](#)

$$ex \quad 24m = 3 \cdot 8m$$



## 12) Semiperimeter of Equilateral Triangle

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

[Open Calculator !\[\]\(e2376d476d06eb31946dc01a69a4403a\_img.jpg\)](#)

$$\text{ex } 12\text{m} = \frac{3 \cdot 8\text{m}}{2}$$

## 13) Semiperimeter of Equilateral Triangle given Circumradius

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

[Open Calculator !\[\]\(0b5e7e25e8775f7e7e80906ada4f0021\_img.jpg\)](#)

$$\text{ex } 12.99038\text{m} = \frac{3 \cdot \sqrt{3}}{2} \cdot 5\text{m}$$





## Variables Used

- **A** Area of Equilateral Triangle (Square Meter)
- **h** Height of Equilateral Triangle (Meter)
- **l<sub>Angle Bisector</sub>** Length of Angle Bisector of Equilateral Triangle (Meter)
- **l<sub>e</sub>** Edge Length of Equilateral Triangle (Meter)
- **M** Median of Equilateral Triangle (Meter)
- **P** Perimeter of Equilateral Triangle (Meter)
- **r<sub>c</sub>** Circumradius of Equilateral Triangle (Meter)
- **r<sub>e</sub>** Exradius of Equilateral Triangle (Meter)
- **r<sub>i</sub>** Inradius of Equilateral Triangle (Meter)
- **s** Semiperimeter of Equilateral Triangle (Meter)









## Constants, Functions, Measurements used

- **Function:** **sqrt**, sqrt(Number)  
*Square root function*
- **Measurement:** **Length** in Meter (m)  
*Length Unit Conversion* 
- **Measurement:** **Area** in Square Meter (m<sup>2</sup>)  
*Area Unit Conversion* 



## Check other formula lists

- [Equilateral Triangle Formulas](#) 
- [Right Angled Triangle Formulas](#) 
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