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Important Formulas of Isosceles Right Triangle

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List of 12 Important Formulas of Isosceles Right Triangle

Important Formulas of Isosceles Right Triangle ↗

1) Area of Isosceles Right Triangle ↗

$$\text{fx } A = \frac{(S_{\text{Legs}})^2}{2}$$

[Open Calculator ↗](#)

$$\text{ex } 32\text{m}^2 = \frac{(8\text{m})^2}{2}$$

2) Area of Isosceles Right Triangle given Hypotenuse ↗

$$\text{fx } A = \frac{H^2}{4}$$

[Open Calculator ↗](#)

$$\text{ex } 30.25\text{m}^2 = \frac{(11\text{m})^2}{4}$$

3) Circumradius of Isosceles Right Triangle ↗

$$\text{fx } r_c = \frac{S_{\text{Legs}}}{\sqrt{2}}$$

[Open Calculator ↗](#)

$$\text{ex } 5.656854\text{m} = \frac{8\text{m}}{\sqrt{2}}$$



4) Hypotenuse of Isosceles Right Triangle

$$\text{fx } H = \sqrt{2} \cdot S_{\text{Legs}}$$

[Open Calculator !\[\]\(cbe80b694ebd74fcfe136a095b608235_img.jpg\)](#)

$$\text{ex } 11.31371\text{m} = \sqrt{2} \cdot 8\text{m}$$

5) Hypotenuse of Isosceles Right Triangle given Perimeter

$$\text{fx } H = \frac{P}{1 + \sqrt{2}}$$

[Open Calculator !\[\]\(3e2231b1ad3ca8da8658228c00dd08e0_img.jpg\)](#)

$$\text{ex } 11.18377\text{m} = \frac{27\text{m}}{1 + \sqrt{2}}$$

6) Inradius of Isosceles Right Triangle

$$\text{fx } r_i = \frac{S_{\text{Legs}}}{2 + \sqrt{2}}$$

[Open Calculator !\[\]\(0d5ec72f61334709c3fc9450209b754f_img.jpg\)](#)

$$\text{ex } 2.343146\text{m} = \frac{8\text{m}}{2 + \sqrt{2}}$$

7) Legs of Isosceles Right Triangle given Area

$$\text{fx } S_{\text{Legs}} = \sqrt{2} \cdot A$$

[Open Calculator !\[\]\(b64b40baaee5acddc1eab8538ba84754_img.jpg\)](#)

$$\text{ex } 8\text{m} = \sqrt{2 \cdot 32\text{m}^2}$$



8) Legs of Isosceles Right Triangle given Hypotenuse

$$\text{fx } S_{\text{Legs}} = \frac{H}{\sqrt{2}}$$

[Open Calculator !\[\]\(e78f798d4ea5c530c9db49e7d26e6b95_img.jpg\)](#)

$$\text{ex } 7.778175\text{m} = \frac{11\text{m}}{\sqrt{2}}$$

9) Median Line on Hypotenuse of Isosceles Right Triangle

$$\text{fx } M_{\text{Hypotenuse}} = \frac{S_{\text{Legs}}}{\sqrt{2}}$$

[Open Calculator !\[\]\(05be7c7a8995decd503647c99211f7c2_img.jpg\)](#)

$$\text{ex } 5.656854\text{m} = \frac{8\text{m}}{\sqrt{2}}$$

10) Median Line on Legs of Isosceles Right Triangle

$$\text{fx } M_{\text{Legs}} = \frac{\sqrt{5} \cdot S_{\text{Legs}}}{2}$$

[Open Calculator !\[\]\(fe3aebe81acea8d45108cd2768939da7_img.jpg\)](#)

$$\text{ex } 8.944272\text{m} = \frac{\sqrt{5} \cdot 8\text{m}}{2}$$

11) Perimeter of Isosceles Right Triangle

$$\text{fx } P = (2 + \sqrt{2}) \cdot S_{\text{Legs}}$$

[Open Calculator !\[\]\(899d8b7697d64725bf017d3296cfcf1b_img.jpg\)](#)

$$\text{ex } 27.31371\text{m} = (2 + \sqrt{2}) \cdot 8\text{m}$$



12) Perimeter of Isosceles Right Triangle given Median Line on Legs [Open Calculator](#) 

$$\text{fx } P = \left(2 + \sqrt{2}\right) \cdot \frac{2 \cdot M_{\text{Legs}}}{\sqrt{5}}$$

$$\text{ex } 27.48389\text{m} = \left(2 + \sqrt{2}\right) \cdot \frac{2 \cdot 9\text{m}}{\sqrt{5}}$$



Variables Used

- **A** Area of Isosceles Right Triangle (Square Meter)
- **H** Hypotenuse of Isosceles Right Triangle (Meter)
- **M_{Hypotenuse}** Median on Hypotenuse of Isosceles Right Triangle (Meter)
- **M_{Legs}** Median on Legs of Isosceles Right Triangle (Meter)
- **P** Perimeter of Isosceles Right Triangle (Meter)
- **r_c** Circumradius of Isosceles Right Triangle (Meter)
- **r_i** Inradius of Isosceles Right Triangle (Meter)
- **S_{Legs}** Legs of Isosceles Right 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 (m²)
Area Unit Conversion 



Check other formula lists

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