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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

Open Calculator

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

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

2) Area of Isosceles Right Triangle given Hypotenuse

Open Calculator

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

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

3) Circumradius of Isosceles Right Triangle

Open Calculator

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

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

4) Hypotenuse of Isosceles Right Triangle

Open Calculator

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

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

5) Hypotenuse of Isosceles Right Triangle given Perimeter

Open Calculator

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

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

6) Inradius of Isosceles Right Triangle

Open Calculator

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

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

7) Legs of Isosceles Right Triangle given Area

Open Calculator

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

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

8) Legs of Isosceles Right Triangle given Hypotenuse

Open Calculator

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

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

9) Median Line on Hypotenuse of Isosceles Right Triangle

Open Calculator

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

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

10) Median Line on Legs of Isosceles Right Triangle

Open Calculator

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

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

11) Perimeter of Isosceles Right Triangle

Open Calculator

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

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

12) Perimeter of Isosceles Right Triangle given Median Line on Legs

Open Calculator

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

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
- Right Angled Triangle Formulas
- Scalene Triangle Formulas
- Triangle Formulas

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