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Reuleaux Triangle Formulas

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List of 20 Reuleaux Triangle Formulas

Reuleaux Triangle

Arc Length of Reuleaux Triangle

1) Arc Length of Reuleaux Triangle

Open Calculator

fx $$l_{Arc} = \frac{\pi \cdot r}{3}$$

ex $$10.47198\text{m} = \frac{\pi \cdot 10\text{m}}{3}$$

2) Arc Length of Reuleaux Triangle given Area

Open Calculator

fx $$l_{Arc} = \frac{\pi \cdot \sqrt{\frac{2 \cdot A}{\pi - \sqrt{3}}}}{3}$$

ex $$10.43647\text{m} = \frac{\pi \cdot \sqrt{\frac{2 \cdot 70\text{m}^2}{\pi - \sqrt{3}}}}{3}$$

3) Arc Length of Reuleaux Triangle given Edge Length

Open Calculator

fx $$l_{Arc} = \frac{\pi \cdot l_e}{3}$$

ex $$10.47198\text{m} = \frac{\pi \cdot 10\text{m}}{3}$$

4) Arc Length of Reuleaux Triangle given Perimeter

Open Calculator

fx $$l_{Arc} = \frac{P}{3}$$

ex $$10\text{m} = \frac{30\text{m}}{3}$$

Area of Reuleaux Triangle

5) Area of Reuleaux Triangle

Open Calculator

fx $$A = \left(\pi - \sqrt{3}\right) \cdot \frac{r^2}{2}$$

ex $$70.47709\text{m}^2 = \left(\pi - \sqrt{3}\right) \cdot \frac{(10\text{m})^2}{2}$$

6) Area of Reuleaux Triangle given Arc Length

Open Calculator

fx $$A = \frac{\left(\pi - \sqrt{3}\right) \cdot \left(\frac{3 \cdot l_{Arc}}{\pi}\right)^2}{2}$$

ex $$77.76356\text{m}^2 = \frac{\left(\pi - \sqrt{3}\right) \cdot \left(\frac{3 \cdot 11\text{m}}{\pi}\right)^2}{2}$$

7) Area of Reuleaux Triangle given Edge Length

Open Calculator

fx $$A = \frac{\left(l_e^2\right) \cdot \left(\pi - \left(\sqrt{3}\right)\right)}{2}$$

ex $$70.47709\text{m}^2 = \frac{\left((10\text{m})^2\right) \cdot \left(\pi - \left(\sqrt{3}\right)\right)}{2}$$

8) Area of Reuleaux Triangle given Perimeter

Open Calculator

fx $$A = \frac{\left(\pi - \sqrt{3}\right) \cdot \left(\frac{P}{\pi}\right)^2}{2}$$

ex $$64.2674\text{m}^2 = \frac{\left(\pi - \sqrt{3}\right) \cdot \left(\frac{30\text{m}}{\pi}\right)^2}{2}$$

Perimeter of Reuleaux Triangle

9) Perimeter of Reuleaux Triangle

Open Calculator

fx $$P = r \cdot \pi$$

ex $$31.41593\text{m} = 10\text{m} \cdot \pi$$

10) Perimeter of Reuleaux Triangle given Arc Length

Open Calculator

fx $$P = \left(3 \cdot l_{Arc}\right)$$

ex $$33\text{m} = \left(3 \cdot 11\text{m}\right)$$

11) Perimeter of Reuleaux Triangle given Area

Open Calculator

fx $$P = \left(\sqrt{\frac{2 \cdot A}{\pi - \sqrt{3}}}\right) \cdot \pi$$

ex $$31.30941\text{m} = \left(\sqrt{\frac{2 \cdot 70\text{m}^2}{\pi - \sqrt{3}}}\right) \cdot \pi$$

12) Perimeter of Reuleaux Triangle given Edge Length

Open Calculator

fx $$P = \pi \cdot l_e$$

ex $$31.41593\text{m} = \pi \cdot 10\text{m}$$

Radius of Reuleaux Triangle

13) Radius of Reuleaux Triangle

Open Calculator

fx $$r = \frac{l_e}{1}$$

ex $$10\text{m} = \frac{10\text{m}}{1}$$

14) Radius of Reuleaux Triangle given Arc Length

Open Calculator

fx $$r = \frac{3 \cdot l_{Arc}}{\pi}$$

ex $$10.50423\text{m} = \frac{3 \cdot 11\text{m}}{\pi}$$

15) Radius of Reuleaux Triangle given Area

Open Calculator

fx $$r = \sqrt{\frac{2 \cdot A}{\pi - \sqrt{3}}}$$

ex $$9.966095\text{m} = \sqrt{\frac{2 \cdot 70\text{m}^2}{\pi - \sqrt{3}}}$$

16) Radius of Reuleaux Triangle given Perimeter

Open Calculator

fx $$r = \frac{P}{\pi}$$

ex $$9.549297\text{m} = \frac{30\text{m}}{\pi}$$

Side Length of Reuleaux Triangle

17) Edge Length of Reuleaux Triangle

Open Calculator

fx $$l_e = \frac{r}{1}$$

ex $$10\text{m} = \frac{10\text{m}}{1}$$

18) Edge Length of Reuleaux Triangle given Arc Length

Open Calculator

fx $$l_e = \frac{3 \cdot l_{Arc}}{\pi}$$

ex $$10.50423\text{m} = \frac{3 \cdot 11\text{m}}{\pi}$$

19) Edge Length of Reuleaux Triangle given Area

Open Calculator

fx $$l_e = \sqrt{\frac{2 \cdot A}{\pi - \sqrt{3}}}$$

ex $$9.966095\text{m} = \sqrt{\frac{2 \cdot 70\text{m}^2}{\pi - \sqrt{3}}}$$

20) Edge Length of Reuleaux Triangle given Perimeter

Open Calculator

fx $$l_e = \frac{P}{\pi}$$

ex $$9.549297\text{m} = \frac{30\text{m}}{\pi}$$

Variables Used

- **A** Area of Reuleaux Triangle *(Square Meter)*
- l_{Arc} Arc Length of Reuleaux Triangle *(Meter)*
- l_e Edge Length of Reuleaux Triangle *(Meter)*
- **P** Perimeter of Reuleaux Triangle *(Meter)*
- **r** Radius of Reuleaux Triangle *(Meter)*

Constants, Functions, Measurements used

- Constant: **pi**, 3.14159265358979323846264338327950288
  Archimedes' constant
- 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

- Annulus Formulas
- Antiparallelogram Formulas
- Arrow Hexagon Formulas
- Astroid Formulas
- Bulge Formulas
- Cardioid Formulas
- Circular Arc Quadrangle Formulas
- Concave Pentagon Formulas
- Concave Regular Hexagon Formulas
- Concave Regular Pentagon Formulas
- Crossed Rectangle Formulas
- Cut Rectangle Formulas
- Cyclic Quadrilateral Formulas
- Cycloid Formulas
- Decagon Formulas
- Dodecagon Formulas
- Double Cycloid Formulas
- Fourstar Formulas
- Frame Formulas
- Golden Rectangle Formulas
- Grid Formulas
- H Shape Formulas
- Half Yin-Yang Formulas
- Heart Shape Formulas
- Hendecagon Formulas
- Heptagon Formulas
- Hexadecagon Formulas
- Hexagon Formulas
- Hexagram Formulas
- House Shape Formulas
- Hyperbola Formulas
- Hypocycloid Formulas
- Isosceles Trapezoid Formulas
- L Shape Formulas
- Line Formulas
- N-gon Formulas
- Nonagon Formulas
- Octagon Formulas
- Octagram Formulas
- Open Frame Formulas
- Parallelogram Formulas
- Pentagon Formulas
- Pentagram Formulas
- Polygram Formulas
- Quadrilateral Formulas
- Quarter Circle Formulas
- Rectangle Formulas
- Rectangular Hexagon Formulas
- Regular Polygon Formulas
- Reuleaux Triangle Formulas

- Rhombus Formulas
- Right Trapezoid Formulas
- Round Corner Formulas
- Salinon Formulas
- Semicircle Formulas
- Sharp Kink Formulas
- Square Formulas
- Star of Lakshmi Formulas
- T Shape Formulas
- Tangential Quadrilateral Formulas
- Trapezoid Formulas
- Tri-equilateral Trapezoid Formulas
- Truncated Square Formulas
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