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Important Formulas of Hexagon

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List of 28 Important Formulas of Hexagon

Important Formulas of Hexagon

Area of Hexagon

1) Area of Hexagon

Open Calculator

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

ex $$93.53074\text{m}^2 = \frac{3 \cdot \sqrt{3}}{2} \cdot (6\text{m})^2$$

2) Area of Hexagon given Circumradius

Open Calculator

fx $$A = \frac{3 \cdot \sqrt{3}}{2} \cdot r_c^2$$

ex $$93.53074\text{m}^2 = \frac{3 \cdot \sqrt{3}}{2} \cdot (6\text{m})^2$$

3) Area of Hexagon given Height

Open Calculator

fx $$A = \frac{\sqrt{3}}{2} \cdot h^2$$

ex $$86.60254\text{m}^2 = \frac{\sqrt{3}}{2} \cdot (10\text{m})^2$$

4) Area of Hexagon given Perimeter

Open Calculator

fx $$A = \frac{P^2}{8 \cdot \sqrt{3}}$$

ex $$93.53074\text{m}^2 = \frac{(36\text{m})^2}{8 \cdot \sqrt{3}}$$

Diagonals of Hexagon

5) Long Diagonal of Hexagon

Open Calculator

fx $$d_{Long} = 2 \cdot l_e$$

ex $$12\text{m} = 2 \cdot 6\text{m}$$

6) Long Diagonal of Hexagon given Circumradius

Open Calculator

fx $$d_{Long} = 2 \cdot r_c$$

ex $$12\text{m} = 2 \cdot 6\text{m}$$

7) Long Diagonal of Hexagon given Short Diagonal

Open Calculator

fx $$d_{Long} = \frac{2}{\sqrt{3}} \cdot d_{Short}$$

ex $$11.54701\text{m} = \frac{2}{\sqrt{3}} \cdot 10\text{m}$$

8) Short Diagonal of Hexagon

Open Calculator

fx $$d_{Short} = \left(\sqrt{3}\right) \cdot l_e$$

ex $$10.3923\text{m} = \left(\sqrt{3}\right) \cdot 6\text{m}$$

9) Short Diagonal of Hexagon given Long Diagonal

Open Calculator

fx $$d_{Short} = \left(\frac{\sqrt{3}}{2}\right) \cdot d_{Long}$$

ex $$10.3923\text{m} = \left(\frac{\sqrt{3}}{2}\right) \cdot 12\text{m}$$

10) Short Diagonal of Hexagon given Perimeter

Open Calculator

fx $$d_{Short} = \frac{P}{2 \cdot \sqrt{3}}$$

ex $$10.3923\text{m} = \frac{36\text{m}}{2 \cdot \sqrt{3}}$$

Edge Length of Hexagon

11) Edge Length of Hexagon given Area

Open Calculator

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

ex $$6.046943\text{m} = \sqrt{\left(\frac{2}{3 \cdot \sqrt{3}}\right) \cdot 95\text{m}^2}$$

12) Edge Length of Hexagon given Height

Open Calculator

fx $$l_e = \frac{h}{\sqrt{3}}$$

ex $$5.773503\text{m} = \frac{10\text{m}}{\sqrt{3}}$$

13) Edge Length of Hexagon given Inradius

Open Calculator

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

ex $$5.773503\text{m} = \frac{2 \cdot 5\text{m}}{\sqrt{3}}$$

14) Edge Length of Hexagon given Width

Open Calculator

fx $l_e = \frac{w}{2}$

ex $6\text{m} = \frac{12\text{m}}{2}$

Height of Hexagon

15) Height of Hexagon

Open Calculator

fx $h = \sqrt{3} \cdot l_e$

ex $10.3923\text{m} = \sqrt{3} \cdot 6\text{m}$

16) Height of Hexagon given Circumradius

Open Calculator

fx $h = \sqrt{3} \cdot r_c$

ex $10.3923\text{m} = \sqrt{3} \cdot 6\text{m}$

17) Height of Hexagon given Inradius

Open Calculator

fx $h = 2 \cdot r_i$

ex $10\text{m} = 2 \cdot 5\text{m}$

18) Height of Hexagon given Perimeter

Open Calculator

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

ex $$10.3923\text{m} = \frac{36\text{m}}{2 \cdot \sqrt{3}}$$

Perimeter of Hexagon

19) Perimeter of Hexagon

Open Calculator

fx $$P = 6 \cdot l_e$$

ex $$36\text{m} = 6 \cdot 6\text{m}$$

20) Perimeter of Hexagon given Area

Open Calculator

fx $$P = \sqrt{8 \cdot \sqrt{3} \cdot A}$$

ex $$36.28166\text{m} = \sqrt{8 \cdot \sqrt{3} \cdot 95\text{m}^2}$$

21) Perimeter of Hexagon given Width

Open Calculator

fx $$P = 3 \cdot w$$

ex $$36\text{m} = 3 \cdot 12\text{m}$$

Radius of Hexagon

22) Circumradius of Hexagon

Open Calculator

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

ex $6\text{m} = \frac{6\text{m}}{1}$

23) Circumradius of Hexagon given Height

Open Calculator

fx $r_c = \frac{h}{\sqrt{3}}$

ex $5.773503\text{m} = \frac{10\text{m}}{\sqrt{3}}$

24) Circumradius of Hexagon given Width

Open Calculator

fx $r_c = \frac{w}{2}$

ex $6\text{m} = \frac{12\text{m}}{2}$

25) Inradius of Hexagon

Open Calculator

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

ex $$5.196152\text{m} = \frac{\sqrt{3}}{2} \cdot 6\text{m}$$

26) Inradius of Hexagon given Circumradius

Open Calculator

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

ex $$5.196152\text{m} = \frac{\sqrt{3}}{2} \cdot 6\text{m}$$

Width of Hexagon

27) Width of Hexagon

Open Calculator

fx $$w = 2 \cdot l_e$$

ex $$12\text{m} = 2 \cdot 6\text{m}$$

28) Width of Hexagon given Perimeter

Open Calculator

fx $$w = \frac{P}{3}$$

ex $$12\text{m} = \frac{36\text{m}}{3}$$

Variables Used

- **A** Area of Hexagon *(Square Meter)*
- d_{Long} Long Diagonal of Hexagon *(Meter)*
- d_{Short} Short Diagonal of Hexagon *(Meter)*
- **h** Height of Hexagon *(Meter)*
- l_e Edge Length of Hexagon *(Meter)*
- **P** Perimeter of Hexagon *(Meter)*
- r_c Circumradius of Hexagon *(Meter)*
- r_i Inradius of Hexagon *(Meter)*
- **w** Width of Hexagon *(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

- Annulus Formulas
- Antiparallelogram Formulas
- Arrow Hexagon Formulas
- Astroid Formulas
- Bulge Formulas
- Cardioid Formulas
- Circular Arc Quadrangle Formulas
- Concave Pentagon Formulas
- Concave Quadrilateral 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
- Koch Curve Formulas
- L Shape Formulas
- Line Formulas
- Lune 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
- Stretched Hexagon Formulas
- T Shape Formulas
- Tangential Quadrilateral Formulas
- Trapezoid Formulas
- Tricorn Formulas
- Tri-equilateral Trapezoid Formulas
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- X Shape Formulas

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