



Heart Shape Formulas

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Examples!

Conversions!

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List of 20 Heart Shape Formulas

Heart Shape &

Area of Heart Shape 🗗

1) Area of Heart Shape

$$\mathbf{f}$$
 $\mathbf{A} = \left(1 + rac{\pi}{4}
ight) \cdot \mathrm{l}^2_{\mathrm{e}(\mathrm{Square})}$

Open Calculator 🗗

$$=$$
 $178.5398 ext{m}^2 = \left(1 + rac{\pi}{4}
ight) \cdot (10 ext{m})^2$

2) Area of Heart Shape given Height

$$\mathbf{A} = \left(1 + \frac{\pi}{4}\right) \cdot \left(\frac{\mathbf{h}}{\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2}}\right)^2$$

ex
$$164.9305 ext{m}^2=\left(1+rac{\pi}{4}
ight)\cdot\left(rac{15 ext{m}}{rac{3\cdot\sqrt{2}}{4}+rac{1}{2}}
ight)^2$$



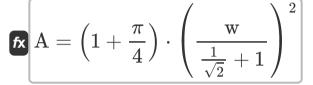
3) Area of Heart Shape given Perimeter

 $\mathbf{K} \left| \mathbf{A} = \left(1 + rac{\pi}{4}
ight) \cdot \left(rac{\mathrm{P}}{2 + \pi}
ight)^2
ight|$

Open Calculator

ex
$$168.8417 ext{m}^2=\left(1+rac{\pi}{4}
ight)\cdot\left(rac{50 ext{m}}{2+\pi}
ight)^2$$

4) Area of Heart Shape given Width



Open Calculator

ex
$$177.0564 ext{m}^2=\left(1+rac{\pi}{4}
ight)\cdot\left(rac{17 ext{m}}{rac{1}{\sqrt{2}}+1}
ight)^2$$

Edge Length of Square of Heart Shape

5) Edge Length of Square of Heart Shape given Area

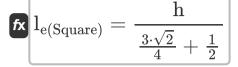
$$\mathrm{l_{e(Square)}} = \sqrt{rac{\mathrm{A}}{1 + rac{\pi}{4}}}$$

ex
$$10.04081 \mathrm{m} = \sqrt{rac{180 \mathrm{m}^2}{1 + rac{\pi}{4}}}$$



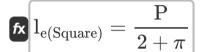


6) Edge Length of Square of Heart Shape given Height



Open Calculator

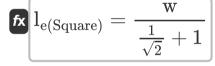
7) Edge Length of Square of Heart Shape given Perimeter



Open Calculator

$$= 2.724613 \text{m} = \frac{50 \text{m}}{2 + \pi}$$

8) Edge Length of Square of Heart Shape given Width



Open Calculator 🖸

$$= \frac{17m}{\frac{1}{\sqrt{2}} + 1}$$



Height of Heart Shape 🗗

9) Height of Heart Shape

$$\mathbf{h} = \left(rac{3\cdot\sqrt{2}}{4} + rac{1}{2}
ight)\cdot l_{ ext{e(Square)}}$$

Open Calculator 🗗

$$oxed{ex} 15.6066 \mathrm{m} = \left(rac{3\cdot\sqrt{2}}{4} + rac{1}{2}
ight)\cdot 10 \mathrm{m}$$

10) Height of Heart Shape given Area

$$h = \left(rac{3\cdot\sqrt{2}}{4} + rac{1}{2}
ight)\cdot\sqrt{rac{A}{1+rac{\pi}{4}}}$$

Open Calculator

ex
$$15.67029 \mathrm{m} = \left(\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2} \right) \cdot \sqrt{\frac{180 \mathrm{m}^2}{1 + \frac{\pi}{4}}}$$

11) Height of Heart Shape given Perimeter

$$\mathbf{f}$$
 $\mathbf{h} = \left(rac{3\cdot\sqrt{2}}{4} + rac{1}{2}
ight)\cdotrac{\mathrm{P}}{2+\pi}$

Open Calculator

$$\boxed{\textbf{ex}} \ 15.17682 \text{m} = \left(\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2} \right) \cdot \frac{50 \text{m}}{2 + \pi}$$



12) Height of Heart Shape given Width

$$\mathbf{h} = \left(\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2}\right) \cdot \frac{\mathbf{w}}{\frac{1}{\sqrt{2}} + 1}$$

Open Calculator

ex
$$15.54163 \mathrm{m} = \left(\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2} \right) \cdot \frac{17 \mathrm{m}}{\frac{1}{\sqrt{2}} + 1}$$

Perimeter of Heart Shape

13) Perimeter of Heart Shape

$$P = (2 + \pi) \cdot l_{e(Square)}$$

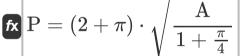
Open Calculator

= 51.41593m $= (2 + \pi) \cdot 10$ m= 100m= 100m









Open Calculator

 $\mathbf{ex} \ 51.62575 \mathrm{m} = (2+\pi) \cdot \sqrt{rac{180 \mathrm{m}^2}{1+rac{\pi}{4}}}$





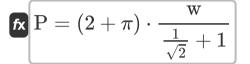
15) Perimeter of Heart Shape given Height

$$ext{P} = (2+\pi) \cdot rac{ ext{h}}{rac{3}{4} \cdot \sqrt{2} + rac{1}{2}}$$

Open Calculator

ex $49.41748 \mathrm{m} = (2+\pi) \cdot \frac{15 \mathrm{m}}{\frac{3}{4} \cdot \sqrt{2} + \frac{1}{2}}$

16) Perimeter of Heart Shape given Width



Open Calculator

Open Calculator

ex 51.20188m = $(2 + \pi) \cdot \frac{17\text{m}}{\frac{1}{\sqrt{2}} + 1}$

Width of Heart Shape &

17) Width of Heart Shape

$$\mathbf{x} = \left(rac{1}{\sqrt{2}} + 1
ight) \cdot l_{e(\mathrm{Square})}$$

$$=$$
 17.07107 m $=$ $\left(\frac{1}{\sqrt{2}} + 1\right) \cdot 10$ m



18) Width of Heart Shape given Area 🚰

Open Calculator

$$\mathbf{x} = \left(\frac{1}{\sqrt{2}} + 1\right) \cdot \sqrt{\frac{A}{1 + \frac{\pi}{4}}}$$

ex
$$17.14073 \mathrm{m} = \left(rac{1}{\sqrt{2}} + 1
ight) \cdot \sqrt{rac{180 \mathrm{m}^2}{1 + rac{\pi}{4}}}$$

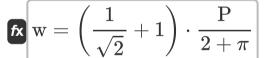
19) Width of Heart Shape given Height

 $\mathbf{x} = \left(rac{1}{\sqrt{2}} + 1
ight) \cdot rac{\mathrm{h}}{rac{3 \cdot \sqrt{2}}{4} + rac{1}{2}}$

Open Calculator

ex
$$16.40754 \mathrm{m} = \left(\frac{1}{\sqrt{2}} + 1\right) \cdot \frac{15 \mathrm{m}}{\frac{3 \cdot \sqrt{2}}{4} + \frac{1}{2}}$$

20) Width of Heart Shape given Perimeter 🖒



Open Calculator 🗗



Variables Used

- **A** Area of Heart Shape (Square Meter)
- **h** Height of Heart Shape (Meter)
- Ie(Square) Edge Length of Square of Heart Shape (Meter)
- P Perimeter of Heart Shape (Meter)
- w Width of Heart Shape (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

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- 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
- 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
- Unicursal Hexagram Formulas
- X Shape Formulas

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