Anticube Formulas... 1/12





Anticube Formulas

Calculators!

Examples!

Conversions!

Bookmark calculatoratoz.com, unitsconverters.com

Widest Coverage of Calculators and Growing - 30,000+ Calculators!

Calculate With a Different Unit for Each Variable - In built Unit Conversion!

Widest Collection of Measurements and Units - 250+ Measurements!

Feel free to SHARE this document with your friends!

Please leave your feedback here...





Open Calculator 🚰

Open Calculator

List of 20 Anticube Formulas

Anticube 🗗

Edge Length of Anticube

1) Edge Length of Anticube

$$ho_{
m e} = rac{
m h}{\sqrt{1-rac{1}{2+\sqrt{2}}}}$$

 $9.513657m = \frac{8m}{\sqrt{1 - \frac{1}{2 + \sqrt{2}}}}$

2) Edge Length of Anticube given Surface to Volume Ratio

$$\mathbf{R} \, \mathbf{l}_{\mathrm{e}} = rac{2 \cdot \left(1 + \sqrt{3}
ight)}{rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \mathrm{R}_{\mathrm{A/V}}}$$



3) Edge Length of Anticube given Total Surface Area

$$ho_{
m e}
ho_{
m e} = \sqrt{rac{{
m TSA}}{2 \cdot \left(1 + \sqrt{3}
ight)}}$$

Open Calculator

$$= \sqrt{\frac{545 m^2}{2 \cdot \left(1 + \sqrt{3}\right)} }$$

4) Edge Length of Anticube given Volume

$$\mathbf{f}_{\mathrm{e}} = \left(rac{3 \cdot \mathrm{V}}{\sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}}}
ight)^{rac{1}{3}}$$

Open Calculator

$$= \left(\frac{3 \cdot 955 \text{m}^{_3}}{\sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}}} \right)^{\frac{1}{3}}$$

Height of Anticube C

5) Height of Anticube

$$h = \sqrt{1-rac{1}{2+\sqrt{2}}} \cdot l_{
m e}$$

$$=$$
 8.408964m $=$ $\sqrt{1-rac{1}{2+\sqrt{2}}}\cdot 10 \mathrm{m}$



Open Calculator

Open Calculator 2

Open Calculator

6) Height of Anticube given Surface to Volume Ratio

 $h=\sqrt{1-rac{1}{2+\sqrt{2}}}\cdotrac{2\cdot\left(1+\sqrt{3}
ight)}{rac{1}{3}\cdot\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}\cdot\mathrm{R}_{\mathrm{A/V}}}$

$$\frac{2\cdot \left(1+\sqrt{3}\right)}{1+\sqrt{2}}$$

7) Height of Anticube given Total Surface Area

$$ext{h} = \sqrt{1-rac{1}{2+\sqrt{2}}}\cdot\sqrt{rac{ ext{TSA}}{2\cdot\left(1+\sqrt{3}
ight)}}$$

8) Height of Anticube given Volume

$$ext{h} = \sqrt{1-rac{1}{2+\sqrt{2}}}\cdot \left(rac{3\cdot ext{V}}{\sqrt{1+\sqrt{2}}\cdot \sqrt{2+\sqrt{2}}}
ight)^{rac{1}{3}}$$

Surface Area of Anticube



Total Surface Area of Anticube

9) Total Surface Area of Anticube

 $extbf{TSA} = 2 \cdot \left(1 + \sqrt{3}
ight) \cdot l_{
m e}^2$

Open Calculator 🗗

$$\mathbf{ex}$$
 546.4102 $\mathbf{m}^2 = 2 \cdot \left(1 + \sqrt{3}\right) \cdot (10 \mathrm{m})^2$

10) Total Surface Area of Anticube given Height

 $ext{TSA} = 2 \cdot \left(1 + \sqrt{3}
ight) \cdot \left(rac{ ext{h}}{\sqrt{1 - rac{1}{2 + \sqrt{2}}}}
ight)$

Open Calculator 🗗

ex
$$494.554 ext{m}^2=2\cdot\left(1+\sqrt{3}
ight)\cdot\left(rac{8 ext{m}}{\sqrt{1-rac{1}{2+\sqrt{2}}}}
ight)^2$$

11) Total Surface Area of Anticube given Surface to Volume Ratio

11) Total Surface Area of Affilicube given Surface to volume Ratio

Open Calculator 🚰

$$ext{TSA} = 2 \cdot \left(1 + \sqrt{3}
ight) \cdot \left(rac{2 \cdot \left(1 + \sqrt{3}
ight)}{rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot ext{R}_{ ext{A/V}}}
ight)^2$$

$$712.5124 \text{m}^2 = 2 \cdot \left(1 + \sqrt{3}\right) \cdot \left(\frac{2 \cdot \left(1 + \sqrt{3}\right)}{\frac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot 0.5 \text{m}^{-1}}\right)^2$$

fx



12) Total Surface Area of Anticube given Volume

TSA = $2 \cdot \left(1 + \sqrt{3}\right) \cdot \left(\frac{3 \cdot V}{\sqrt{1 + \sqrt{2} \cdot \sqrt{2 + \sqrt{2}}}}\right)$

Open Calculator

 $= 2 \cdot \left(1 + \sqrt{3}\right) \cdot \left(\frac{3 \cdot 955 \text{m}^3}{\sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}}}\right)^{\frac{2}{3}}$

Surface to Volume Ratio of Anticube

13) Surface to Volume Ratio of Anticube

 ${f R}_{
m A/V} = rac{2\cdot\left(1+\sqrt{3}
ight)}{rac{1}{3}\cdot\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}\cdot l_{
m e}}$

Open Calculator 🗗

 $oxed{ex} 0.570962 \mathrm{m}^{-1} = rac{2 \cdot \left(1 + \sqrt{3}
ight)}{rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot 10 \mathrm{m}}$

14) Surface to Volume Ratio of Anticube given Height

 $ext{R}_{ ext{A/V}} = rac{2\cdot\left(1+\sqrt{3}
ight)}{rac{1}{3}\cdot\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}\cdotrac{ ext{h}}{\sqrt{1-rac{1}{2+\sqrt{2}}}}}$

Open Calculator



15) Surface to Volume Ratio of Anticube given Total Surface Area

 $2\cdot\left(1+\sqrt{3}\right)$

Open Calculator

Open Calculator

$$R_{A/V} = \frac{\sqrt{1 + \sqrt{2} \cdot \sqrt{2 + \sqrt{2}} \cdot \sqrt{\frac{TSA}{2 \cdot \left(1 + \sqrt{3}\right)}}}}{\frac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \sqrt{\frac{TSA}{2 \cdot \left(1 + \sqrt{3}\right)}}}$$

16) Surface to Volume Ratio of Anticube given Volume

$$2\cdot\left(1+\sqrt{3}
ight)$$

 $\frac{1}{3} \cdot \sqrt{1+\sqrt{2}} \cdot \sqrt{2+\sqrt{2}} \cdot \left(\frac{3\cdot \mathrm{V}}{\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}}\right)^{\frac{1}{3}}$

 $0.57136 \mathrm{m}^{-1} = -$

$$=rac{2\cdot\left(1+\sqrt{3}
ight)}{rac{1}{3}\cdot\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}\cdot\left(rac{3\cdot955 ext{m}^3}{\sqrt{1+\sqrt{2}}\cdot\sqrt{2+\sqrt{2}}}
ight)^{rac{1}{3}}}$$

Volume of Anticube

17) Volume of Anticube

$$extbf{V} = rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot l_{
m e}^3$$

$$extbf{ex}$$
 $957 ext{m}^3 = rac{1}{3} \cdot \sqrt{1+\sqrt{2}} \cdot \sqrt{2+\sqrt{2}} \cdot \left(10 ext{m}
ight)^3$

Open Calculator





18) Volume of Anticube given Height

Open Calculator

Open Calculator

$$V = rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \left(rac{h}{\sqrt{1 - rac{1}{2 + \sqrt{2}}}}
ight)$$

$$824.0516 \mathrm{m}^{\scriptscriptstyle 3} = \frac{1}{3} \cdot \sqrt{1+\sqrt{2}} \cdot \sqrt{2+\sqrt{2}} \cdot \left(\frac{8\mathrm{m}}{\sqrt{1-\frac{1}{2+\sqrt{2}}}}\right)^3$$

19) Volume of Anticube given Surface to Volume Ratio

$$ext{V} = rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \left(rac{2 \cdot \left(1 + \sqrt{3}
ight)}{rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot ext{R}_{ ext{A/V}}}
ight)^3$$

$$= \frac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \left(\frac{2 \cdot \left(1 + \sqrt{3}\right)}{\frac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot 0.5 \text{m}^{-1}} \right)^{3}$$

20) Volume of Anticube given Total Surface Area 🛂

$$V = rac{1}{3} \cdot \sqrt{1 + \sqrt{2}} \cdot \sqrt{2 + \sqrt{2}} \cdot \left(\sqrt{rac{ ext{TSA}}{2 \cdot \left(1 + \sqrt{3}
ight)}}
ight)^3$$

$$953.2977 \mathrm{m}^{_3} = \frac{1}{3} \cdot \sqrt{1+\sqrt{2}} \cdot \sqrt{2+\sqrt{2}} \cdot \left(\sqrt{\frac{545 \mathrm{m}^2}{2 \cdot \left(1+\sqrt{3}\right)}}\right)^3$$



fx



Anticube Formulas... 9/12

Variables Used

- **h** Height of Anticube (*Meter*)
- le Edge Length of Anticube (Meter)
- R_{A/V} Surface to Volume Ratio of Anticube (1 per Meter)
- TSA Total Surface Area of Anticube (Square Meter)
- **V** Volume of Anticube (Cubic Meter)





Anticube Formulas...

Constants, Functions, Measurements used

• Function: sqrt, sqrt(Number)

A square root function is a function that takes a non-negative number as an input and returns the square root of the given input number.

• Measurement: Length in Meter (m)
Length Unit Conversion

• Measurement: Volume in Cubic Meter (m³)

Volume Unit Conversion

• Measurement: Area in Square Meter (m²)

Area Unit Conversion

• Measurement: Reciprocal Length in 1 per Meter (m⁻¹)

Reciprocal Length Unit Conversion





10/12

Anticube Formulas... 11/12

Check other formula lists

- Anticube Formulas
- Antiprism Formulas
- Barrel Formulas
- Bent Cuboid Formulas
- Bicone Formulas
- Capsule Formulas
- Circular Hyperboloid Formulas
- Cuboctahedron Formulas
- Cut Cylinder Formulas
- Cut Cylindrical Shell Formulas
- Cylinder Formulas
- Cylindrical Shell Formulas
- Diagonally Halved Cylinder Formulas
- Disphenoid Formulas
- Double Calotte Formulas
- Double Point Formulas
- Ellipsoid Formulas
- Elliptic Cylinder Formulas
- Elongated Dodecahedron Formulas
- Flat End Cylinder Formulas
- Frustum of Cone Formulas
- Great Dodecahedron Formulas
- Great Icosahedron Formulas
- Great Stellated Dodecahedron
 Formulas
- Half Cylinder Formulas
- Half Tetrahedron Formulas
- Hemisphere Formulas
- Hollow Cuboid Formulas
- Hollow Cylinder Formulas
- Hollow Frustum Formulas
- Hollow Hemisphere Formulas

- Hollow Pyramid Formulas
- Hollow Sphere Formulas
- Ingot Formulas
- Obelisk Formulas
- Oblique Cylinder Formulas
- Oblique Prism Formulas
- Obtuse Edged Cuboid Formulas
- Oloid Formulas
- Paraboloid Formulas
- Parallelepiped Formulas
- Ramp Formulas
- Regular Bipyramid Formulas
- Rhombohedron Formulas
- Right Wedge Formulas
- Semi Ellipsoid Formulas
- Sharp Bent Cylinder Formulas
- Skewed Three Edged Prism Formulas
- Small Stellated Dodecahedron
 Formulas
- Solid of Revolution Formulas
- Sphere Formulas
- Spherical Cap Formulas
- Spherical Corner Formulas
- Spherical Ring Formulas
- Spherical Sector Formulas
- Spherical Segment Formulas
- Spherical Wedge Formulas
- Square Pillar Formulas
- Star Pyramid Formulas
- Stellated Octahedron Formulas
- Toroid Formulas





Anticube Formulas... 12/12

- Torus Formulas
 - Truncated Rhombohedron Formulas



Feel free to SHARE this document with your friends!

PDF Available in

English Spanish French German Russian Italian Portuguese Polish Dutch

5/16/2024 | 5:42:53 AM UTC

Please leave your feedback here...



