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Right Kite Formulas

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List of 15 Right Kite Formulas

Right Kite

Angles of Right Kite

1) Acute Angle of Right Kite

$$\text{fx } \angle_{\text{Acute}} = \pi - \angle_{\text{Obtuse}}$$

[Open Calculator !\[\]\(de95854c7ee024cfadc48187bbb781b2_img.jpg\)](#)

$$\text{ex } 45^\circ = \pi - 135^\circ$$

2) Obtuse Angle of Right Kite

fx

$$\angle_{\text{Obtuse}} = 2 \cdot \arccos \left(\frac{S_{\text{Short}}^2 + d_{\text{Symmetry}}^2 - S_{\text{Long}}^2}{2 \cdot S_{\text{Short}} \cdot d_{\text{Symmetry}}} \right)$$

[Open Calculator !\[\]\(9c2e8d1b5bd77cb5c9f83b7a9cff79fd_img.jpg\)](#)

$$\text{ex } 134.7603^\circ = 2 \cdot \arccos \left(\frac{(5\text{m})^2 + (13\text{m})^2 - (12\text{m})^2}{2 \cdot 5\text{m} \cdot 13\text{m}} \right)$$

Area and Perimeter of Right Kite

3) Area of Right Kite

$$\text{fx } A = S_{\text{Short}} \cdot S_{\text{Long}}$$

[Open Calculator !\[\]\(eabd9f9ababee93effadc3b380fe65fd_img.jpg\)](#)

$$\text{ex } 60\text{m}^2 = 5\text{m} \cdot 12\text{m}$$



4) Perimeter of Right Kite

$$fx \quad P = 2 \cdot (S_{\text{Short}} + S_{\text{Long}})$$

[Open Calculator !\[\]\(cbe80b694ebd74fcfe136a095b608235_img.jpg\)](#)

$$ex \quad 34m = 2 \cdot (5m + 12m)$$

Diagonals of Right Kite

5) Non Symmetry Diagonal of Right Kite

$$fx \quad d_{\text{Non Symmetry}} = \frac{2 \cdot S_{\text{Short}} \cdot S_{\text{Long}}}{d_{\text{Symmetry}}}$$

[Open Calculator !\[\]\(5361750c22c4e047a52f4eac1ec2d4cc_img.jpg\)](#)

$$ex \quad 9.230769m = \frac{2 \cdot 5m \cdot 12m}{13m}$$

6) Symmetry Diagonal of Right Kite

$$fx \quad d_{\text{Symmetry}} = \sqrt{S_{\text{Short}}^2 + S_{\text{Long}}^2}$$

[Open Calculator !\[\]\(b792654f2cef9719eabeb6c5be00811e_img.jpg\)](#)

$$ex \quad 13m = \sqrt{(5m)^2 + (12m)^2}$$

7) Symmetry Diagonal of Right Kite given Circumradius

$$fx \quad d_{\text{Symmetry}} = 2 \cdot r_c$$

[Open Calculator !\[\]\(84f47badaad7772cd95667a7c387a639_img.jpg\)](#)

$$ex \quad 14m = 2 \cdot 7m$$



Radius of Right Kite

8) Circumradius of Right Kite

$$\text{fx } r_c = \frac{d_{\text{Symmetry}}}{2}$$

[Open Calculator !\[\]\(23d9fc146e83b5c3013cfa32c784f8d5_img.jpg\)](#)

$$\text{ex } 6.5\text{m} = \frac{13\text{m}}{2}$$

9) Inradius of Right Kite

$$\text{fx } r_i = \frac{S_{\text{Short}} \cdot S_{\text{Long}}}{S_{\text{Short}} + S_{\text{Long}}}$$

[Open Calculator !\[\]\(aa53ad6fea213b8b2226d3077e30533a_img.jpg\)](#)

$$\text{ex } 3.529412\text{m} = \frac{5\text{m} \cdot 12\text{m}}{5\text{m} + 12\text{m}}$$

Sides of Right Kite

Long Side of Right Kite

10) Long Side of Right Kite given Area

$$\text{fx } S_{\text{Long}} = \frac{A}{S_{\text{Short}}}$$

[Open Calculator !\[\]\(248b91fcdac4810ffd15cf33fb6aec6f_img.jpg\)](#)

$$\text{ex } 12\text{m} = \frac{60\text{m}^2}{5\text{m}}$$



11) Long Side of Right Kite given both Diagonals

$$fx \quad S_{\text{Long}} = \frac{d_{\text{Symmetry}} \cdot d_{\text{Non Symmetry}}}{2 \cdot S_{\text{Short}}}$$

[Open Calculator !\[\]\(e2376d476d06eb31946dc01a69a4403a_img.jpg\)](#)

$$ex \quad 11.7m = \frac{13m \cdot 9m}{2 \cdot 5m}$$

12) Long Side of Right Kite given Symmetry Diagonal

$$fx \quad S_{\text{Long}} = \sqrt{d_{\text{Symmetry}}^2 - S_{\text{Short}}^2}$$

[Open Calculator !\[\]\(0b5e7e25e8775f7e7e80906ada4f0021_img.jpg\)](#)

$$ex \quad 12m = \sqrt{(13m)^2 - (5m)^2}$$

Short Side of Right Kite

13) Short Side of Right Kite given Area

$$fx \quad S_{\text{Short}} = \frac{A}{S_{\text{Long}}}$$

[Open Calculator !\[\]\(0fb13ad0bfa3d86868cdd3883e5665b3_img.jpg\)](#)

$$ex \quad 5m = \frac{60m^2}{12m}$$




14) Short Side of Right Kite given both Diagonals 

$$\text{fx } S_{\text{Short}} = \frac{d_{\text{Symmetry}} \cdot d_{\text{Non Symmetry}}}{2 \cdot S_{\text{Long}}}$$

[Open Calculator](#) 

$$\text{ex } 4.875\text{m} = \frac{13\text{m} \cdot 9\text{m}}{2 \cdot 12\text{m}}$$

15) Short Side of Right Kite given Symmetry Diagonal 

$$\text{fx } S_{\text{Short}} = \sqrt{d_{\text{Symmetry}}^2 - S_{\text{Long}}^2}$$

[Open Calculator](#) 

$$\text{ex } 5\text{m} = \sqrt{(13\text{m})^2 - (12\text{m})^2}$$






Variables Used

- \angle **Acute** Acute Angle of Right Kite (Degree)
- \angle **Obtuse** Obtuse Angle of Right Kite (Degree)
- **A** Area of Right Kite (Square Meter)
- **d_{Non Symmetry}** Non Symmetry Diagonal of Right Kite (Meter)
- **d_{Symmetry}** Symmetry Diagonal of Right Kite (Meter)
- **P** Perimeter of Right Kite (Meter)
- **r_c** Circumradius of Right Kite (Meter)
- **r_i** Inradius of Right Kite (Meter)
- **S_{Long}** Long Side of Right Kite (Meter)
- **S_{Short}** Short Side of Right Kite (Meter)



Constants, Functions, Measurements used

- **Constant:** **pi**, 3.14159265358979323846264338327950288
Archimedes' constant
- **Function:** **arccos**, arccos(Number)
Inverse trigonometric cosine function
- **Function:** **cos**, cos(Angle)
Trigonometric cosine function
- **Function:** **sqrt**, sqrt(Number)
Square root function
- **Measurement:** **Length** in Meter (m)
Length Unit Conversion 
- **Measurement:** **Area** in Square Meter (m²)
Area Unit Conversion 
- **Measurement:** **Angle** in Degree (°)
Angle Unit Conversion 



Check other formula lists

- [Kite Formulas](#) 
- [Half Square Kite Formulas](#) 
- [Right Kite Formulas](#) 

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