



Half Square Kite Formulas

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List of 12 Half Square Kite Formulas

Half Square Kite 🗗

Angle, Area and Perimeter of Half Square Kite

1) Area of Half Square Kite

$$oldsymbol{ ilde{K}} oldsymbol{ ext{A}} = rac{ ext{S}_{ ext{Square}}^2 + \left(ext{d}_{ ext{s(Non Square)}} \cdot ext{d}_{ ext{Square}}
ight)}{2}$$

 $\boxed{ 44 \text{m}^2 = \frac{\left(5 \text{m}\right)^2 + \left(9 \text{m} \cdot 7 \text{m}\right)}{2} }$

2) Perimeter of Half Square Kite

$$extbf{R} = 2 \cdot (ext{S}_{ ext{Square}} + ext{S}_{ ext{Non Square}})$$

 $30m = 2 \cdot (5m + 10m)$

3) Stretched Corner Angle of Right Angle in Half Square Kite

 $oxed{oxed{x}} oxed{oxed{oxed}_{ ext{Stretched Corner}} = rccosigg(rac{\left(2\cdot ext{S}_{ ext{Non Square}}^2
ight) - ext{d}_{ ext{Square}}^2}{2\cdot ext{S}_{ ext{Non Square}}^2}igg)}$

 $\boxed{ 40.97463^\circ = \arccos \Bigg(\frac{ \left(2 \cdot (10 \mathrm{m})^2 \right) - (7 \mathrm{m})^2}{2 \cdot (10 \mathrm{m})^2} \Bigg) }$

4) Symmetry Angle of Half Square Kite

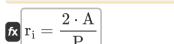
$$oxed{oxedsymmetry} = rac{rac{3 \cdot \pi}{2} - igselow{ ext{Stretched Corner}}}{2}$$

$$\boxed{115° = \frac{\frac{3\cdot\pi}{2} - 40°}{2}}$$



Radius and Diagonal of Half Square Kite &

5) Inradius of Half Square Kite



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 $2m = \frac{2 \cdot 45m^2}{30m}$

6) Square Diagonal of Half Square Kite

fx $d_{\mathrm{Square}} = S_{\mathrm{Square}} \cdot \sqrt{2}$

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7) Symmetry Diagonal of Half Square Kite 🗗

fx

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= 12.93297m = $\sqrt{(5\text{m})^2 + (10\text{m})^2 - (2 \cdot 5\text{m} \cdot 10\text{m} \cdot \cos(115^\circ))}$

 $d_{Symmetry} = \sqrt{S_{Square}^2 + S_{Non \, Square}^2 - (2 \cdot S_{Square} \cdot S_{Non \, Square} \cdot cos(\angle_{Symmetry}))}$

Side and Section of Half Square Kite

8) Non Square Side of Half Square Kite given Perimeter 🗗

 $extbf{K} extbf{S}_{ ext{Non Square}} = rac{ ext{P}}{2} - ext{S}_{ ext{Square}}$

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 $10m = \frac{30m}{2} - 5m$

9) Non Square Sided Symmetry Diagonal Section of Half Square Kite 🗗

 $d_{
m s(Non~Square)} = d_{
m Symmetry} - d_{
m s(Square)}$

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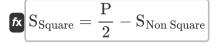
|9m| = 13m - 4m







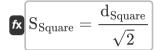
10) Square Side of Half Square Kite given Perimeter 🗗



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$$\boxed{\texttt{ex}} \, 5 \mathrm{m} = \frac{30 \mathrm{m}}{2} - 10 \mathrm{m}$$

11) Square Side of Half Square Kite given Square Diagonal



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$$4.949747 ext{m} = rac{7 ext{m}}{\sqrt{2}}$$

12) Square Sided Symmetry Diagonal Section of Half Square Kite



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$$\boxed{\textbf{ex} \left[3.535534\text{m} = \frac{5\text{m}}{\sqrt{2}} \right]}$$



Variables Used

- ∠Stretched Corner Stretched Corner Angle of Half Square Kite (Degree)
- ∠Symmetry Symmetry Angle of Half Square Kite (Degree)
- A Area of Half Square Kite (Square Meter)
- d_{s(Non Square)} Non Square Sided Symmetry Diagonal Section of HSK (Meter)
- d_{s(Square)} Square Sided Symmetry Diagonal Section of HSK (Meter)
- d_{Square} Square Diagonal of Half Square Kite (Meter)
- d_{Symmetry} Symmetry Diagonal of Half Square Kite (Meter)
- P Perimeter of Half Square Kite (Meter)
- ri Inradius of Half Square Kite (Meter)
- S_{Non Square} Non Square Side of Half Square Kite (Meter)
- S_{Square} Square Side of Half Square 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

- Right Kite Formulas
- Half Square Kite Formulas

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