

Important Arrow Hexagon Formulas PDF



Formulas Examples with Units

List of 9 Important Arrow Hexagon Formulas

1) Area of Arrow Hexagon Formula

Formula

$$A = \frac{(h_{\text{Total}} \cdot w_{\text{Base}}) - (h_{\text{Gap}} \cdot w_{\text{Gap}})}{2}$$

Example with Units

$$32\text{m}^2 = \frac{(11\text{m} \cdot 9\text{m}) - (7\text{m} \cdot 5\text{m})}{2}$$

Evaluate Formula 

2) Base Width of Arrow Hexagon Formula

Formula

$$w_{\text{Base}} = \sqrt{2 \cdot S_{\text{Long}}^2 \cdot (1 - \cos(\angle_{\text{Top}}))}$$

Example with Units

$$7.6537\text{m} = \sqrt{2 \cdot 10\text{m}^2 \cdot (1 - \cos(45^\circ))}$$

Evaluate Formula 

3) Base Width of Arrow Hexagon given Base Side Formula

Formula

$$w_{\text{Base}} = 2 \cdot S_{\text{Base}} + w_{\text{Gap}}$$

Example with Units

$$9\text{m} = 2 \cdot 2\text{m} + 5\text{m}$$

Evaluate Formula 

4) Gap Height of Arrow Hexagon Formula

Formula

$$h_{\text{Gap}} = \sqrt{\frac{(4 \cdot S_{\text{Short}}^2) - w_{\text{Gap}}^2}{4}}$$

Example with Units

$$5.4544\text{m} = \sqrt{\frac{(4 \cdot 6\text{m}^2) - 5\text{m}^2}{4}}$$

Evaluate Formula 

5) Gap Height of Arrow Hexagon given Total Height Formula

Formula

$$h_{\text{Gap}} = h_{\text{Total}} - h_{\text{Top}}$$

Example with Units

$$7\text{m} = 11\text{m} - 4\text{m}$$

Evaluate Formula 

6) Perimeter of Arrow Hexagon Formula

Formula

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

Example with Units

$$36\text{m} = 2 \cdot (10\text{m} + 2\text{m} + 6\text{m})$$

Evaluate Formula 



7) Short Sides of Arrow Hexagon Formula ↻

Formula

$$S_{\text{Short}} = \sqrt{\frac{w_{\text{Gap}}^2}{2 \cdot (1 - \cos(\angle_{\text{Top}}))}}$$

Example with Units

$$6.5328\text{m} = \sqrt{\frac{5\text{m}^2}{2 \cdot (1 - \cos(45^\circ))}}$$

Evaluate Formula ↻

8) Top Height of Arrow Hexagon Formula ↻

Formula

$$h_{\text{Top}} = h_{\text{Total}} - h_{\text{Gap}}$$

Example with Units

$$4\text{m} = 11\text{m} - 7\text{m}$$

Evaluate Formula ↻

9) Total Height of Arrow Hexagon Formula ↻

Formula

$$h_{\text{Total}} = \sqrt{\frac{(4 \cdot S_{\text{Long}}^2) - w_{\text{Base}}^2}{4}}$$

Example with Units

$$8.9303\text{m} = \sqrt{\frac{(4 \cdot 10\text{m}^2) - 9\text{m}^2}{4}}$$

Evaluate Formula ↻



Variables used in list of Arrow Hexagon Formulas above

- \angle_{Top} Top Angle of Arrow Hexagon (Degree)
- **A** Area of Arrow Hexagon (Square Meter)
- **h_{Gap}** Gap Height of Arrow Hexagon (Meter)
- **h_{Top}** Top Height of Arrow Hexagon (Meter)
- **h_{Total}** Total Height of Arrow Hexagon (Meter)
- **P** Perimeter of Arrow Hexagon (Meter)
- **S_{Base}** Base Side of Arrow Hexagon (Meter)
- **S_{Long}** Long Side of Arrow Hexagon (Meter)
- **S_{Short}** Short Side of Arrow Hexagon (Meter)
- **w_{Base}** Base Width of Arrow Hexagon (Meter)
- **w_{Gap}** Gap Width of Arrow Hexagon (Meter)

Constants, Functions, Measurements used in list of Arrow Hexagon Formulas above

- **Functions:** **cos**, $\cos(\text{Angle})$
Cosine of an angle is the ratio of the side adjacent to the angle to the hypotenuse of the triangle.
- **Functions:** **sqrt**, $\text{sqrt}(\text{Number})$
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:** **Area** in Square Meter (m²)
Area Unit Conversion 
- **Measurement:** **Angle** in Degree (°)
Angle Unit Conversion 



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