Important Hexagram Formulas PDF

Formulas
Examples
with Units

List of 20
Important Hexagram Formulas

1) Area of Hexagram Formulas

1.1) Area of Hexagram Formula

Evaluate Formula

Formula

$$A = 3 \cdot \sqrt{3} \cdot l_{Chord\ Slice}^2$$

Example with Units

$$129.9038\,\text{m}^2 = 3 \cdot \sqrt{3} \cdot 5\,\text{m}^2$$

1.2) Area of Hexagram given Chord Length Formula

Evaluate Formula

Formula

$$A = \frac{l_c^2}{\sqrt{3}}$$

Example with Units

$$129.9038\,\text{m}^2 = \frac{15\,\text{m}^2}{\sqrt{3}}$$

1.3) Area of Hexagram given Hexagonal Edge Length Formula

Evaluate Formula

Formula

$$A = \sqrt{3} \cdot l_{e(Hexagon)}^2$$

Example with Units

$$140.2961\,\text{m}^2 = \sqrt{3} \cdot 9\,\text{m}^2$$

1.4) Area of Hexagram given Perimeter Formula

Evaluate Formula

Formula

$$A = \frac{\sqrt{3}}{48} \cdot P^2$$

Example with Units

$$129.9038\,\text{m}^2 = \frac{\sqrt{3}}{48} \cdot 60\,\text{m}^2$$

2) Chord Length of Hexagram Formulas

2.1) Chord Length of Hexagram Formula

Evaluate Formula

Formula

$$l_c = \sqrt{3} \cdot l_{e(Hexagon)}$$

Example with Units

$$15.5885\,\text{m} = \sqrt{3} \cdot 9\,\text{m}$$

2.2) Chord Length of Hexagram given Area Formula

Evaluate Formula

Formula

$$l_c = \sqrt{\sqrt{3} \cdot A}$$

Example with Units

$$15.0056\,\text{m} = \sqrt{\sqrt{3} \cdot 130\,\text{m}^2}$$

2.3) Chord Length of Hexagram given Chord Slice Formula

Evaluate Formula

Formula

$$l_c = 3 \cdot l_{\text{Chord Slice}}$$

Example with Units

$$15\,\text{m} = 3 \cdot 5\,\text{m}$$

2.4) Chord Length of Hexagram given Perimeter Formula

Evaluate Formula

Formula

$$l_c = \frac{P}{4}$$

Example with Units

$$15\,\text{m} = \frac{60\,\text{m}}{4}$$

3) Chord Slice of Hexagram Formulas

3.1) Chord Slice of Hexagram Formula

Evaluate Formula

Formula

$$l_{\text{Chord Slice}} = \frac{l_c}{3}$$

Example with Units

$$5\,\text{m} = \frac{15\,\text{m}}{3}$$

3.2) Chord Slice of Hexagram given Area Formula

Evaluate Formula

Formula

$$l_{\text{Chord Slice}} = \sqrt{\frac{A}{3 \cdot \sqrt{3}}}$$

Example with Units

$$5.0019\,\text{m} = \sqrt{\frac{130\,\text{m}^2}{3 \cdot \sqrt{3}}}$$

3.3) Chord Slice of Hexagram given Hexagonal Edge Length Formula

Evaluate Formula

Formula

$$l_{\text{Chord Slice}} = \frac{l_{e(\text{Hexagon})}}{\sqrt{3}}$$

Example with Units

$$5.1962\,\text{m} = \frac{9\,\text{m}}{\sqrt{3}}$$

3.4) Chord Slice of Hexagram given Perimeter Formula

Evaluate Formula

Formula

$$l_{\text{Chord Slice}} = \frac{P}{12}$$

Example with Units

$$5\,\text{m} = \frac{60\,\text{m}}{12}$$

4) Edge Length of Hexagram Formulas

4.1) Hexagonal Edge Length of Hexagram given Area Formula

Evaluate Formula

Formula

$$l_{e(\text{Hexagon})} = \sqrt{\frac{A}{\sqrt{3}}}$$

Example with Units

$$8.6635\,\text{m} = \sqrt{\frac{130\,\text{m}^2}{\sqrt{3}}}$$

4.2) Hexagonal Edge Length of Hexagram given Chord Length Formula

Evaluate Formula

Formula

$$l_{e(Hexagon)} = \frac{l_c}{\sqrt{3}}$$

Example with Units

$$8.6603\,\text{m} = \frac{15\,\text{m}}{\sqrt{3}}$$

4.3) Hexagonal Edge Length of Hexagram given Chord Slice Formula

Evaluate Formula

Formula

$$l_{e(Hexagon)} = \sqrt{3} \cdot l_{Chord\ Slice}$$

Example with Units

$$8.6603\,\text{m} = \sqrt{3} \cdot 5\,\text{m}$$

4.4) Hexagonal Edge Length of Hexagram given Perimeter Formula

Evaluate Formula

Formula

$$l_{e(Hexagon)} = \frac{P}{4 \cdot \sqrt{3}}$$

Example with Units

$$8.6603\,\text{m} = \frac{60\,\text{m}}{4 \cdot \sqrt{3}}$$

5) Perimeter of Hexagram Formulas

5.1) Perimeter of Hexagram Formula

Evaluate Formula

Formula

$$P = 12 \cdot l_{Chord\ Slice}$$

Example with Units

$$60\,\text{m} = 12 \cdot 5\,\text{m}$$

5.2) Perimeter of Hexagram given Area Formula

Evaluate Formula

Formula

$$P = 4 \cdot \sqrt{\sqrt{3} \cdot A}$$

Example with Units

$$60.0222\,\text{m} = 4 \cdot \sqrt{\sqrt{3} \cdot 130\,\text{m}^2}$$

5.3) Perimeter of Hexagram given Chord Length Formula

Evaluate Formula

Formula

$$P = 4 \cdot l_c$$

Example with Units

$$60\,\text{m} = 4 \cdot 15\,\text{m}$$

5.4) Perimeter of Hexagram given Hexagonal Edge Length Formula

Evaluate Formula

Formula

$$P = 4 \cdot \sqrt{3} \cdot l_{e(Hexagon)}$$

Example with Units

$$62.3538\,\text{m} = 4 \cdot \sqrt{3} \cdot 9\,\text{m}$$

Variables used in list of Hexagram Formulas above

- **A** Area of Hexagram *(Square Meter)*
- l_c Chord Length of Hexagram *(Meter)*
- $l_{\text{Chord Slice}}$ Chord Slice Length of Hexagram *(Meter)*
- $l_{e(\text{Hexagon})}$ Hexagonal Edge Length of Hexagram *(Meter)*
- **P** Perimeter of Hexagram *(Meter)*

Constants, Functions, Measurements used in list of Hexagram Formulas above

- Functions: **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: **Area** in Square Meter (m²)
  Area Unit Conversion

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