Important Quarter Circle Formulas PDF

Formulas
Examples
with Units

List of 30
Important Quarter Circle Formulas

1) Arc Length of Quarter Circle Formulas

1.1) Arc Length of Quarter Circle Formula

Evaluate Formula

Formula

$$l_{Arc} = \frac{\pi \cdot r}{2}$$

Example with Units

$$7.854\,\text{m} = \frac{3.1416 \cdot 5\,\text{m}}{2}$$

1.2) Arc Length of Quarter Circle given Area Formula

Evaluate Formula

Formula

$$l_{Arc} = \sqrt{\pi \cdot A}$$

Example with Units

$$7.9267\,\text{m} = \sqrt{3.1416 \cdot 20\,\text{m}^2}$$

1.3) Arc Length of Quarter Circle given Chord Length Formula

Evaluate Formula

Formula

$$l_{Arc} = \frac{\pi \cdot l_{Chord}}{\sqrt{8}}$$

Example with Units

$$7.775\,\text{m} = \frac{3.1416 \cdot 7\,\text{m}}{\sqrt{8}}$$

1.4) Arc Length of Quarter Circle given Diameter Formula

Evaluate Formula

Formula

$$l_{Arc} = \frac{\pi \cdot D_{Circle}}{4}$$

Example with Units

$$7.854\,\text{m} = \frac{3.1416 \cdot 10\,\text{m}}{4}$$

1.5) Arc Length of Quarter Circle given Perimeter Formula

Evaluate Formula

Formula

$$l_{Arc} = \frac{\pi \cdot P}{\pi + 4}$$

Example with Units

$$7.9182\,\text{m} = \frac{3.1416 \cdot 18\,\text{m}}{3.1416 + 4}$$

2) Area of Quarter Circle Formulas

2.1) Area of Quarter Circle given Arc Length Formula

Evaluate Formula

Formula

$$A = \frac{l_{Arc}^2}{\pi}$$

Example with Units

$$20.3718\,\text{m}^2 = \frac{8\,\text{m}^2}{3.1416}$$

2.2) Area of Quarter Circle given Chord Length Formula

Evaluate Formula

Formula

$$A = \frac{\pi \cdot l_{Chord}^2}{8}$$

Example with Units

$$19.2423\,m^2 = \frac{3.1416 \cdot 7\,m^2}{8}$$

2.3) Area of Quarter Circle given Diameter of Circle Formula

Evaluate Formula

Formula

$$A = \frac{\pi \cdot D_{Circle}^2}{16}$$

Example with Units

$$19.635\,m^2 = \frac{3.1416 \cdot 10\,m^2}{16}$$

2.4) Area of Quarter Circle given Perimeter Formula

Evaluate Formula

Formula

$$A = \frac{\pi \cdot P^2}{(\pi + 4)^2}$$

Example with Units

$$19.9574\,m^2 = \frac{3.1416 \cdot 18\,m^2}{(3.1416 + 4)^2}$$

2.5) Area of Quarter Circle given Radius Formula

Evaluate Formula

Formula

$$A = \frac{\pi \cdot r^2}{4}$$

Example with Units

$$19.635\,m^2 = \frac{3.1416 \cdot 5\,m^2}{4}$$

3) Chord Length of Quarter circle Formulas

3.1) Chord Length of Quarter Circle Formula

Evaluate Formula

Formula

$$l_{Chord} = r \cdot \sqrt{2}$$

Example with Units

$$7.0711\,m = 5\,m \cdot \sqrt{2}$$

3.2) Chord Length of Quarter Circle given Arc Length Formula

Evaluate Formula

Formula

$$l_{Chord} = \frac{\sqrt{8} \cdot l_{Arc}}{\pi}$$

Example with Units

$$7.2025\,m = \frac{\sqrt{8} \cdot 8\,m}{3.1416}$$

3.3) Chord Length of Quarter Circle given Area Formula

Evaluate Formula

Formula

$$l_{Chord} = \sqrt{\frac{8 \cdot A}{\pi}}$$

Example with Units

$$7.1365\,m = \sqrt{\frac{8 \cdot 20\,m^2}{3.1416}}$$

3.4) Chord Length of Quarter Circle given Diameter Formula

Evaluate Formula

Formula

$$l_{Chord} = \frac{D_{Circle}}{\sqrt{2}}$$

Example with Units

$$7.0711\,\text{m} = \frac{10\,\text{m}}{\sqrt{2}}$$

3.5) Chord Length of Quarter Circle given Perimeter Formula

Evaluate Formula

Formula

$$l_{Chord} = \frac{\sqrt{8} \cdot P}{\pi + 4}$$

Example with Units

$$7.1289\,\text{m} = \frac{\sqrt{8} \cdot 18\,\text{m}}{3.1416 + 4}$$

4) Diameter of Quarter Circle Formulas

4.1) Diameter of Quarter Circle Formula

Evaluate Formula

Formula

$$D_{Circle} = 2 \cdot r$$

Example with Units

$$10\,\text{m} = 2 \cdot 5\,\text{m}$$

4.2) Diameter of Quarter Circle given Arc Length Formula

Evaluate Formula

Formula

$$D_{Circle} = 4 \cdot \frac{l_{Arc}}{\pi}$$

Example with Units

$$10.1859\,\text{m} = 4 \cdot \frac{8\,\text{m}}{3.1416}$$

4.3) Diameter of Quarter Circle given Area Formula

Evaluate Formula

Formula

$$D_{Circle} = 2 \cdot \sqrt{4 \cdot \frac{A}{\pi}}$$

Example with Units

$$10.0925\,\text{m} = 2 \cdot \sqrt{4 \cdot \frac{20\,\text{m}^2}{3.1416}}$$

4.4) Diameter of Quarter Circle given Chord Length Formula

Evaluate Formula

Formula

$$D_{Circle} = l_{Chord} \cdot \sqrt{2}$$

Example with Units

$$9.8995\,\text{m} = 7\,\text{m} \cdot \sqrt{2}$$

4.5) Diameter of Quarter Circle given Perimeter Formula

Evaluate Formula

Formula

$$D_{Circle} = \frac{4 \cdot P}{\pi + 4}$$

Example with Units

$$10.0818\,\text{m} = \frac{4 \cdot 18\,\text{m}}{3.1416 + 4}$$

5) Perimeter of Quarter Circle Formulas

5.1) Perimeter of Quarter Circle Formula

Evaluate Formula

Formula

$$P = 2 \cdot r \cdot \left(1 + \frac{\pi}{4}\right)$$

Example with Units

$$17.854\,\text{m} = 2 \cdot 5\,\text{m} \cdot \left(1 + \frac{3.1416}{4}\right)$$

5.2) Perimeter of Quarter Circle given Arc Length Formula

Evaluate Formula

Formula

$$P = \frac{(\pi + 4) \cdot l_{Arc}}{\pi}$$

Example with Units

$$18.1859\,\text{m} = \frac{(3.1416 + 4) \cdot 8\,\text{m}}{3.1416}$$

5.3) Perimeter of Quarter Circle given Area Formula

Evaluate Formula

Formula

$$P = (\pi + 4) \cdot \sqrt{\frac{A}{\pi}}$$

Example with Units

$$18.0192\,\text{m} = (3.1416 + 4) \cdot \sqrt{\frac{20\,\text{m}^2}{3.1416}}$$

5.4) Perimeter of Quarter Circle given Chord Length Formula

Evaluate Formula

Formula

$$P = \frac{(\pi + 4) \cdot l_{Chord}}{\sqrt{8}}$$

Example with Units

$$17.6745\,\text{m} = \frac{(3.1416 + 4) \cdot 7\,\text{m}}{\sqrt{8}}$$

5.5) Perimeter of Quarter Circle given Diameter of Circle Formula

Evaluate Formula

Formula

$$P = D_{Circle} \cdot \left(1 + \frac{\pi}{4}\right)$$

Example with Units

$$17.854\,\text{m} = 10\,\text{m} \cdot \left(1 + \frac{3.1416}{4}\right)$$

6) Radius of Quarter Circle Formulas

6.1) Radius of Quarter Circle given Arc Length Formula

Evaluate Formula

Formula

$$r = 2 \cdot \frac{l_{Arc}}{\pi}$$

Example with Units

$$5.093\,\text{m} = 2 \cdot \frac{8\,\text{m}}{3.1416}$$

6.2) Radius of Quarter Circle given Area Formula

Evaluate Formula

Formula

$$r = \sqrt{4 \cdot \frac{A}{\pi}}$$

Example with Units

$$5.0463\,\text{m} = \sqrt{4 \cdot \frac{20\,\text{m}^2}{3.1416}}$$

6.3) Radius of Quarter Circle given Chord Length Formula

Evaluate Formula

Formula

$$r = \frac{l_{Chord}}{\sqrt{2}}$$

Example with Units

$$4.9497\,\text{m} = \frac{7\,\text{m}}{\sqrt{2}}$$

6.4) Radius of Quarter Circle given Diameter Formula

Evaluate Formula

Formula

$$r = \frac{D_{Circle}}{2}$$

Example with Units

$$5\,\text{m} = \frac{10\,\text{m}}{2}$$

6.5) Radius of Quarter Circle given Perimeter Formula

Evaluate Formula

Formula

$$r = \frac{2 \cdot P}{\pi + 4}$$

Example with Units

$$5.0409\,\text{m} = \frac{2 \cdot 18\,\text{m}}{3.1416 + 4}$$

Variables used in list of Quarter Circle Formulas above

- **A** Area of Quarter Circle *(Square Meter)*
- D_{Circle} Diameter of Circle of Quarter Circle *(Meter)*
- l_{Arc} Arc Length of Quarter Circle *(Meter)*
- l_{Chord} Chord Length of Quarter Circle *(Meter)*
- **P** Perimeter of Quarter Circle *(Meter)*
- **r** Radius of Quarter Circle *(Meter)*

Constants, Functions, Measurements used in list of Quarter Circle Formulas above

- constant(s): **pi**, 3.14159265358979323846264338327950288 *Archimedes' constant*
- 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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