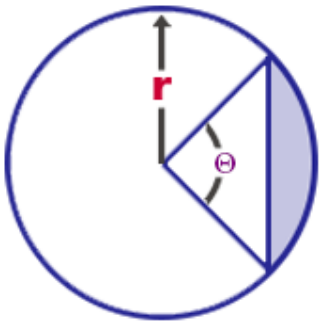
Area Formula

Area of a segment:



:

For Degrees,

$A = (r^2 \div 2) \times ((\pi \div 180 \times \theta) - \sin \theta)$

For Radians,

$A = (0.5 \times r^2) \times (\theta - \sin \theta)$

Where:

A = Area

r = Radius

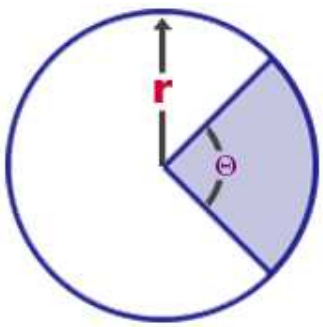
π = Pi (3.14)

θ = Angle

0.5 = A constant

180 = A constant

Area of a sector:



:

If calculated in degrees:

$A = (\theta \div 360) \times (\pi \times r^2)$

If calculated in radians:

$A = 0.5 \times r^2 \times \theta$

Where

A = Area

θ = Angle (measured in radians or degrees)

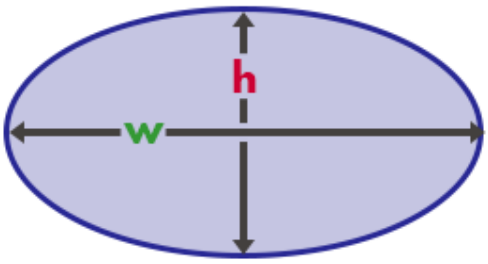
π = Pi (3.14)

r = radius

360 = A Constant

0.5 = A Constant

Area of a Ellipse:



:

A = π x ((w ÷ 2) x (h ÷ 2))

Where:

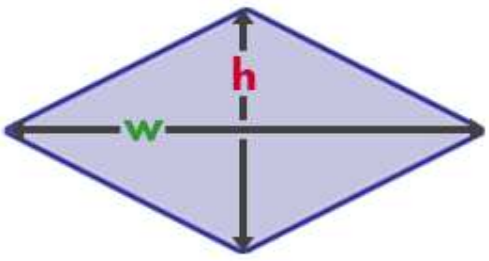
A = Area

π = Pi (3.14)

w = the width

h = the height

Area of a Rhombus:



:

A = (w x h) ÷ 2

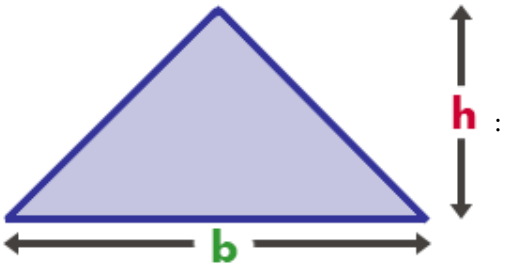
Where:

A = Area

w = the width

h = the height

Area of a Triangle:



A = 0.5 x b x h

Where:

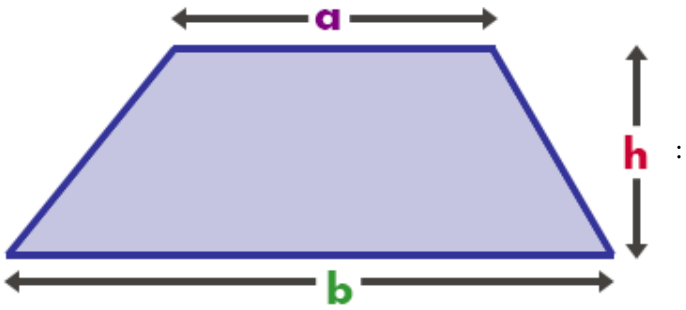
A = area

0.5 = a constant

b = length of the base (bottom)

h = the height

Area of a Trapezium:



A = 0.5 x (a + b) x h

Where

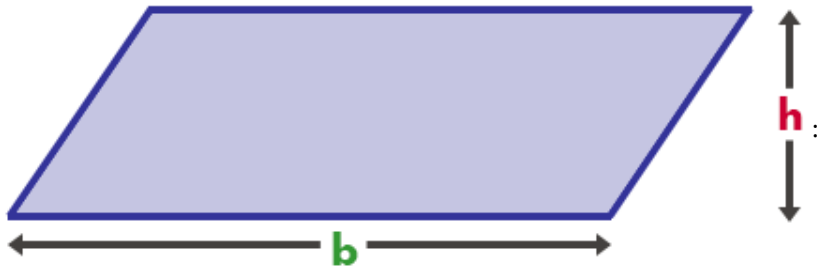
A = The Area

a = The length of the top

b = The length of the base

h = The height

Area of a Parallelogram:



A = b x h

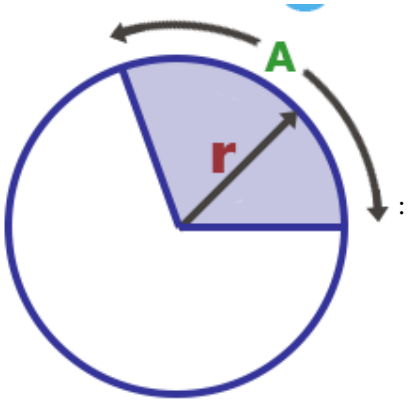
Where

A = The Area

b = The length of the base

h = The height

Area of a Arc Length:



Arc length (A) = (θ ÷ 360) x (2 x π x r)

or

A = (θ ÷ 360) x (D x π)

Where:

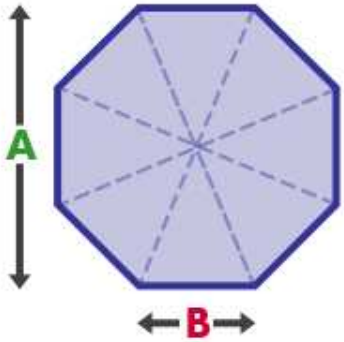
A = Arc length

θ = Arc angle (in degrees)

r = radius of circle

D = Diameter of circle

Area of a Octagon:



:

first calculate the area of one triangle

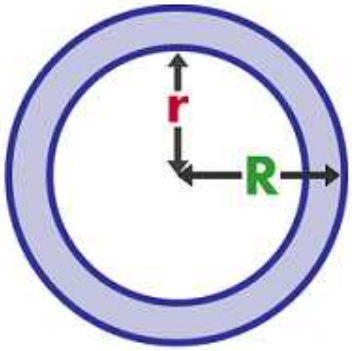
Area of a triangle = 0.5 x Base x Height

There are 8 triangles in an octagon, so Area of a one triangle x 8

or

= 2 x (1 + v2) x B^2

Area of a Annulus:



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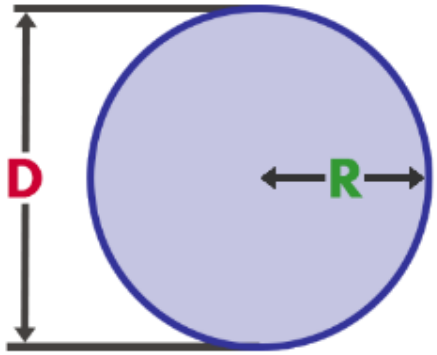
The area = π x (Outer Radius ^{2} –Inner radius ^{2})

Where:

π = Pi (3.14)

Area of a Circle:



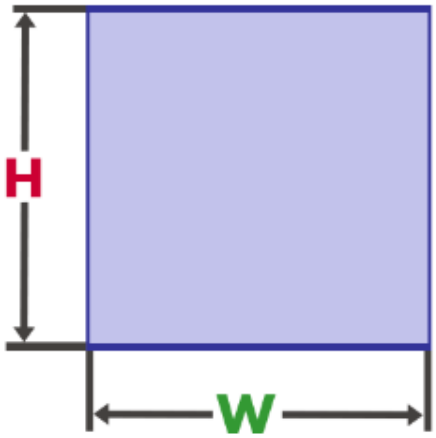
:

The area = π x **Radius** ^{2}

Where:

π = Pi (3.14)

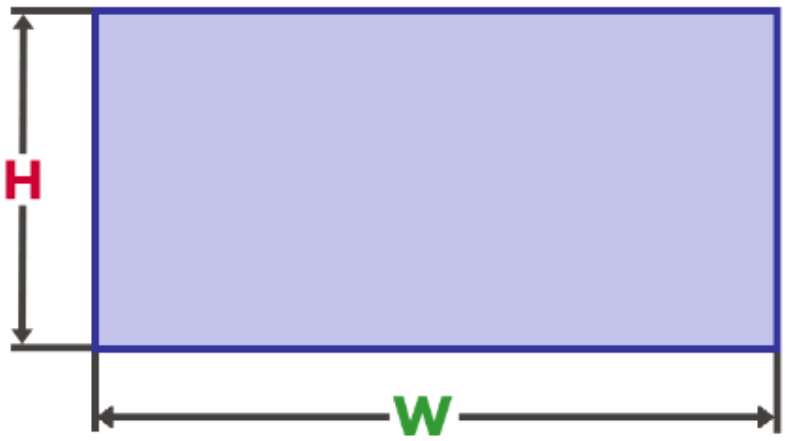
Area of a Square:



:

The area = Height x Width

Area of a Rectangle:



:

The area = Height x Width

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