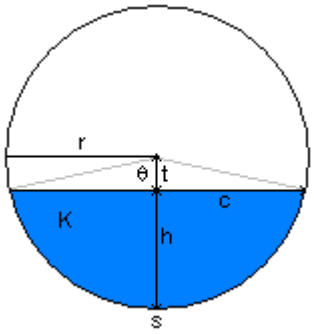
Circle Segment Equations Formulas Calculator
Math Geometry



Solving for circle segment chord length.

$$c = 2\sqrt{r^2 - t^2}$$

Equation is valid only when segment height is less than circle radius.

circle radius (r)	33
circle center to chord midpoint distance (t)	21

Calculate

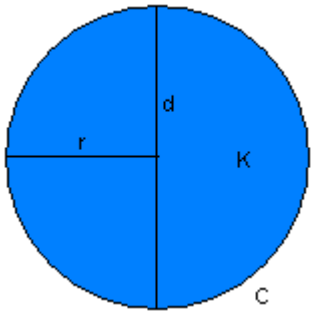
ns:

circle radius (r)	= 0	= 0
circle center to chord midpoint distance (t)	= 0	= 0

chord length (c) = HAS NOT BEEN CALCULATED

Change Equation
Select an equation to solve for a different unknown

Circle



$d = 2r$	diameter
$r = \frac{d}{2}$	radius

$C = 2\pi r$	circumference
$r = \frac{C}{2\pi}$	radius

$C = \pi \times d$	circumference
$d = \frac{C}{\pi}$	diameter

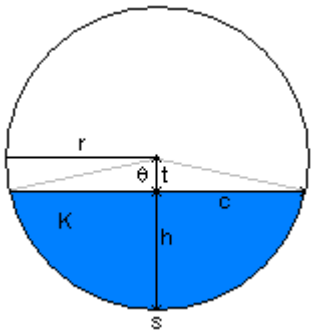
$C = 2\sqrt{\pi \times K}$	circumference
$K = \frac{C^2}{4\pi}$	area

$K = \pi r^2$	area
$r = \sqrt{\frac{K}{\pi}}$	radius

$K = \frac{\pi \times d^2}{4}$	area
$d = \sqrt{\frac{4 \times K}{\pi}}$	diameter

$K = \frac{C \times r}{2}$	area
$C = \frac{2 \times K}{r}$	circumference
$r = \frac{2 \times K}{C}$	radius

Segment of a Circle



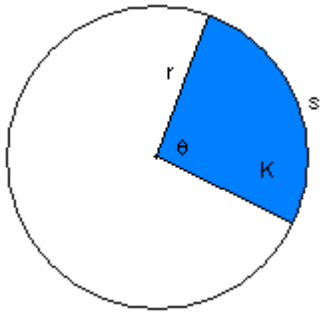
$c = 2\sqrt{r^2 - t^2}$	chord length
$r = \sqrt{\frac{c^2}{4} + t^2}$	circle radius
$t = \sqrt{r^2 - \frac{c^2}{4}}$	circle center to chord midpoint distance

$K = \frac{r^2(\theta - \sin\theta)}{2}$	segment area
$r = \sqrt{\frac{2 \times K}{(\theta - \sin\theta)}}$	circle radius

$\theta = \frac{s}{r}$	central angle
$s = \theta \times r$	arc length
$r = \frac{s}{\theta}$	circle radius

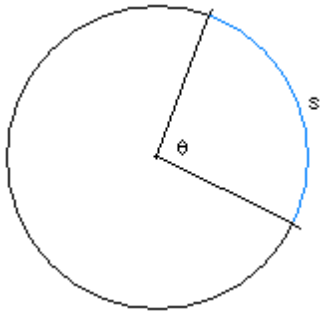
$h = r - t$	segment height
$r = h + t$	circle radius
$t = r - h$	circle center to chord midpoint distance

Sector of a Circle



$K = \frac{r^2 \times \theta}{2}$	sector area
$r = \sqrt{\frac{2 \times K}{\theta}}$	circle radius
$\theta = \frac{2 \times K}{r^2}$	central angle

Arc of a Circle



$s = r \times \theta$	arc length
$r = \frac{s}{\theta}$	circle radius

$\theta = \frac{s}{r}$	central angle

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