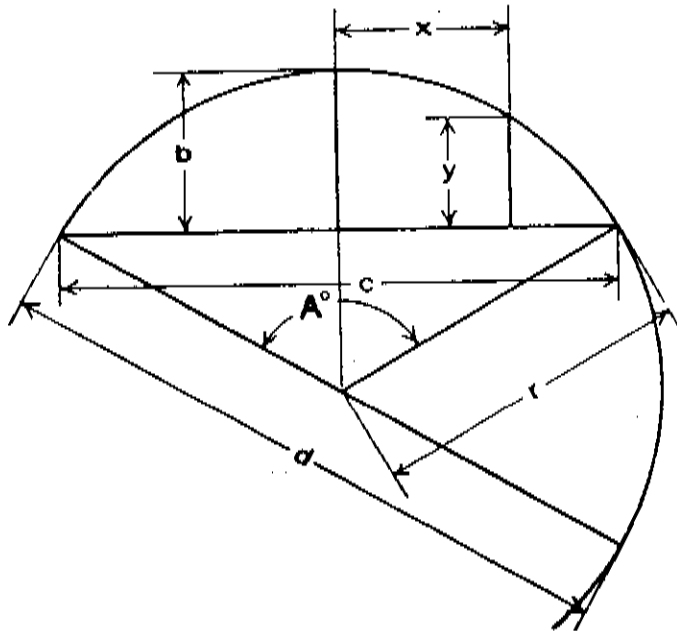


PROPERTIES OF THE CIRCLE



$$\begin{aligned} \text{Circumference} &= 6.28318 r = 3.14159 d \\ \text{Diameter} &= 0.31831 \text{ circumference} \\ \text{Area} &= 3.14159 r^2 \end{aligned}$$

$$\text{Arc } a = \frac{\pi r A^\circ}{180^\circ} = 0.017453 r A^\circ$$

$$\text{Angle } A^\circ = \frac{180^\circ a}{\pi r} = 57.29578 \frac{a}{r}$$

$$\text{Radius } r = \frac{4 b^2 + c^2}{8 b}$$

$$\text{Chord } c = 2 \sqrt{2 b r - b^2} = 2 r \sin \frac{A}{2}$$

$$\text{Rise } b = r - \frac{1}{2} \sqrt{4 r^2 - c^2} = \frac{c}{2} \tan \frac{A}{4}$$

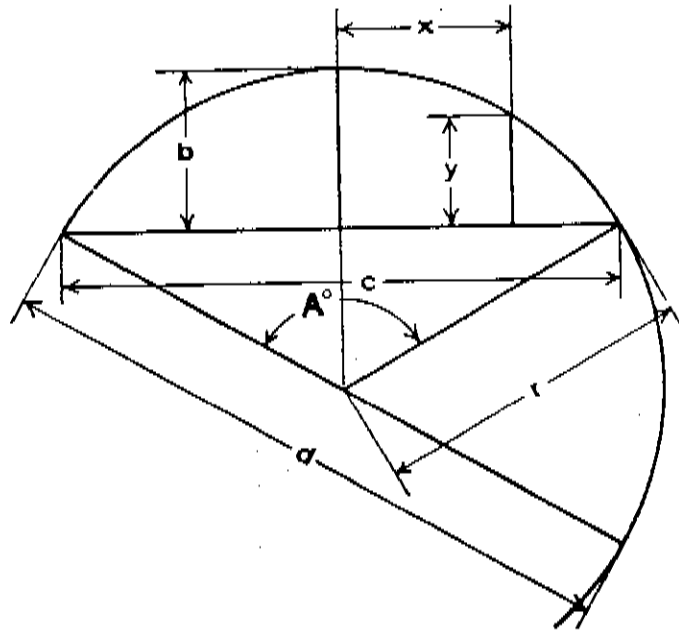
$$= 2 r \sin^2 \frac{A}{4} = r + y - \sqrt{r^2 - x^2}$$

$$y = b - r + \sqrt{r^2 + x^2}$$

$$x = \sqrt{r^2 - (r + y - b)^2}$$

$$\begin{aligned} \text{Diameter of circle of equal periphery as square} &= 1.27324 \text{ side of square} \\ \text{Side of square of equal periphery as circle} &= 0.78540 \text{ diameter of circle} \\ \text{Diameter of circle circumscribed about square} &= 1.41421 \text{ side of square} \\ \text{Side of square inscribed in circle} &= 0.70711 \text{ diameter of circle} \end{aligned}$$

PROPERTIES OF THE CIRCLE



Circumference = 6.28318 r = 3.14159 d
 Diameter = 0.31831 circumference
 Area = 3.14159 r²

Arc a = $\frac{\pi r A^\circ}{180^\circ} = 0.017453 r A^\circ$

Angle A° = $\frac{180^\circ a}{\pi r} = 57.29578 \frac{a}{r}$

Radius r = $\frac{4 b^2 + c^2}{8 b}$

Chord c = $2 \sqrt{2 b r - b^2} = 2 r \sin \frac{A}{2}$

Rise b = $r - \frac{1}{2} \sqrt{4 r^2 - c^2} = \frac{c}{2} \tan \frac{A}{4}$

$= 2 r \sin^2 \frac{A}{4} = r + y - \sqrt{r^2 - x^2}$

y = b - r + $\sqrt{r^2 + x^2}$

x = $\sqrt{r^2 - (r + y - b)^2}$

Diameter of circle of equal periphery as square = 1.27324 side of square
 Side of square of equal periphery as circle = 0.78540 diameter of circle
 Diameter of circle circumscribed about square = 1.41421 side of square
 Side of square inscribed in circle = 0.70711 diameter of circle