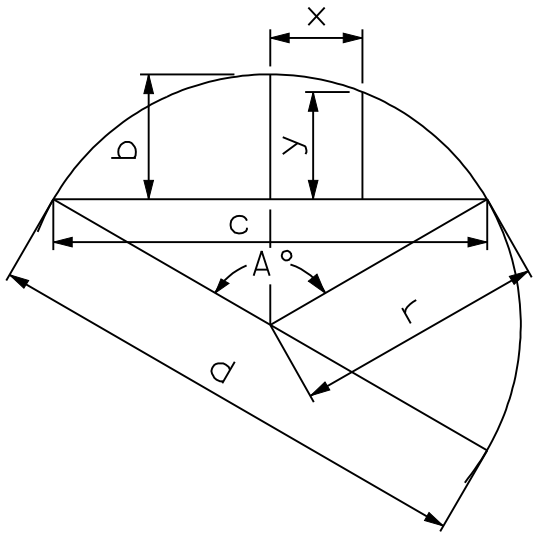
$\pi = 3.14159265359$



CIRCUMFERENCE = 6.28318 r = 3.14159d

DIAMETER = 0.31831 CIRCUMFERENCE

AREA $= \pi r^2$

ARC a $= \frac{\pi r A°}{180°} = 0.017453\ r\ A°$

ANGLE A° $= \frac{180°\ a}{\pi r} = 57.29578\ \frac{a}{r}$

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

CHORD C $= 2\sqrt{2br - b^2} = 2r\ \text{SIN}\frac{A}{2}$

RISE B $= r - \frac{1}{2}\sqrt{4r^2 - c^2} = \frac{C}{2}\ \text{TAN}\frac{A}{4}$

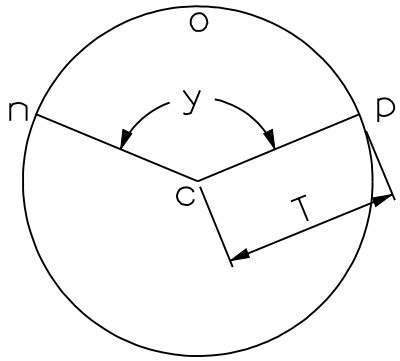
$= 2\ r\ \text{SIN}^2\frac{A}{4} = r + y - \sqrt{r^2 - x^2}$

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

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

DIAMETER OF CIRCLE OF EQUAL PERIPHERY AS SQUARE = 1.27324 SIDE OF SQUARE
SIDE OF 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

CIRCULAR SECTION



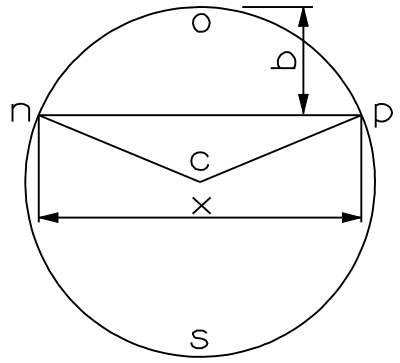
r = RADIUS OF CIRCLE y = ANGLE ncp IN DEGREES

AREA OF SECTOR ncpo $= \frac{1}{2}$ (LENGTH OF ARC nop X r)

$= \text{AREA OF CIRCLE X}\frac{y}{360}$

$= 0.0087266\ \text{X}\ r^2\ \text{X}\ y$

CIRCULAR SEGMENT



r = RADIUS OF CIRCLE x = CHORD b = RISE

AREA OF SEGMENT nop = AREA OF SECTOR ncpo - AREA OF TRIANGLE ncp

$= \frac{(\text{LENGTH OF ARC nop X r}) - x\ (r-b)}{2}$

AREA OF SEGMENT nsp = AREA OF CIRCLE - AREA OF SEGMENT nop

PROPERTIES OF THE CIRCLE

FIGURE 1 – 7