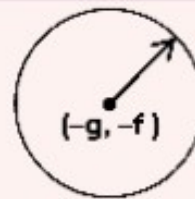


VARIOUS FORMS OF EQUATIONS OF CIRCLE

General Form

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

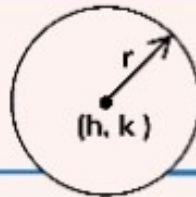


$$r = \sqrt{g^2 + f^2 - c}$$

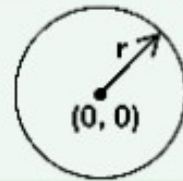
Centre Radius Form

$$(x - h)^2 + (y - k)^2 = r^2$$

Special case

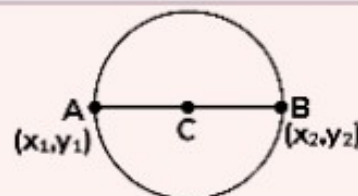


$$x^2 + y^2 = r^2$$



Diametric Form

$$(x - x_1)(x - x_2) + (y - y_1)(y - y_2) = 0$$

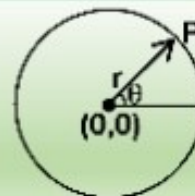


Parametric Form

$$x^2 + y^2 = r^2$$

$$x = r \cos \theta$$

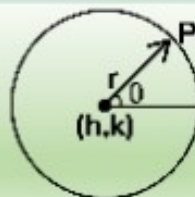
$$y = r \sin \theta$$



$$(x - h)^2 + (y - k)^2 = r^2$$

$$x = h + r \cos \theta$$

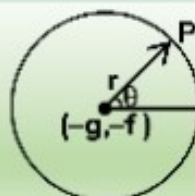
$$y = k + r \sin \theta$$



$$x^2 + y^2 + 2gx + 2fy + c = 0$$

$$x = -g + \sqrt{g^2 + f^2 - c} \cos \theta$$

$$y = -f + \sqrt{g^2 + f^2 - c} \sin \theta$$



$$r = \sqrt{g^2 + f^2 - c}$$