

The general equation for a circle centered at the origin is $x^2 + y^2 = r^2$ where r is the radius.

Examples

$x^2 + y^2 = 16$ is a circle centered at the origin with radius 4. See figure 1

$x^2 + y^2 = 10$ is a circle centered at the origin with radius $\sqrt{10}$. See figure 2

Fig 1

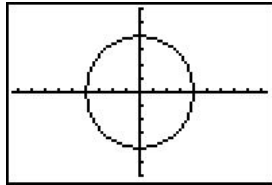
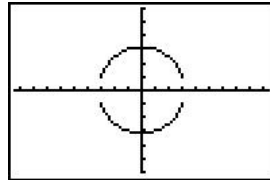


Fig. 2



To graph on the calculator, solve for y and then use $Y1$ and $Y2$. Notice that the graph may be inaccurate, with the ends not touching.

Circles can also be drawn on the calculator using the DRAW menu as in figure 4 and 5 below.

Y Editor for Fig. 1

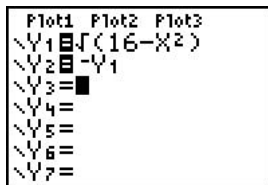


Fig. 4

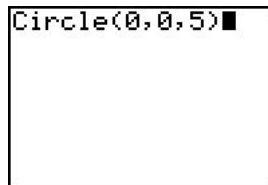
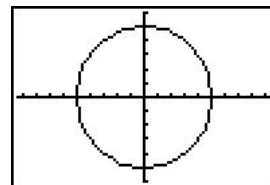


Fig. 5



For circles not having the origin as center, the formula is $(x - h)^2 + (y - k)^2 = r^2$ (h, k) is the center and r is the radius.

The formula for a circle centered at $(2, 5)$ with radius 4 is $(x - 2)^2 + (y - 5)^2 = 16$ Fig. 6

The formula for a circle centered at $(-2, -5)$ with radius 3 is $(x + 2)^2 + (y + 5)^2 = 9$ Fig. 7, 8

Fig. 6

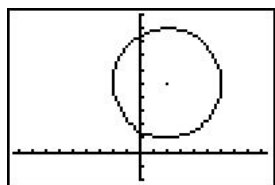


Fig. 7

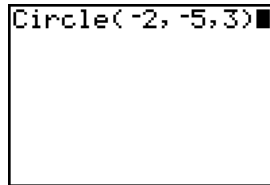


Fig. 8

