Functions and Graphing III

Graph the following circles and find the radii

(i) $x^2 + y^2 = 49$

(ii) $x^2 + y^2 = \frac{16}{9}$

(iii) $x^2 + y^2 = 10$

(iv) $x^2 + y^2 = 9$

(v) $7x^2 + 7y^2 = 28$

Graph $x^2 + y^2 = 100$ **and find the radius by examining the extremities.**

We will need to rewrite the equation by expressing y in terms of x

$$y^2 = 100 - x^2$$
$$\Rightarrow y = \sqrt{100 - x^2}$$

Step 1: **In Func mode go to *y* =**

Step 2: **Type** y_1 **=** $\sqrt{\ }(100 - x^2)$

Step 3: **Type** y_2 **=** $-y_1$

Step 4: **Go to *Zoom* and then scroll down to**

6:ZStandard

this resets the window variables to the standard values

Step 5: **Go to *Zoom* and then scroll down to**

5:ZSquare

Adjusts pixels to equal width and height

Step 6: **To check *ZSquare* window variables**

Press *window*

This will also give the *Xmin* and *Xmax* values which are the extremities of the circle.

Graphic Calculator