

## The Circle

The equation that describes a circle is

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

To write this equation in the formula field of SURFER we have to re-write it as

$$x^2 + y^2 - a^2 = 0.$$

The parameter  $a$  denotes the radius  $r$  of the circle and can be changed using the slider. You can now add a second parameter  $b$  to squeeze the circle and to make an ellipse out of it, for example with:

$$bx^2 + y^2 - a^2 = 0$$

where  $b = 0.5$ .