Answer on Question #80328 – Math – Calculus

Question

Name of the curve √x+√y=1

Solution

$\sqrt{x}+\sqrt{y}=1 \ \rightarrow \ \sqrt{y}=1-\sqrt{x} \rightarrow \ y=1-2\sqrt{x}+x \ \rightarrow$

$(x-y+1)^2=4x$.

Let $t=x+y,\ s=x-y.$

So, $(s+1)^2=2(s+t) \ \rightarrow \ t=\frac{s^2}{2}+\frac{1}{2}.$

This is a parabola.

This is only a part of a parabola, since when *x* or *y* are smaller than zero, or larger than 1, the original equation is undefined.