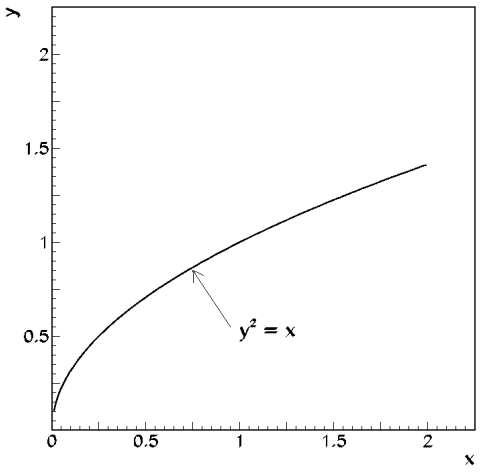
Physics 3210, Spring 2019 Discussion #9

1. Let

$$\vec{A} \;=\; x^2\hat{x} + y^2\hat{y} + z^2\hat{z}$$

and consider the parabolic path $y^2 = x$ as shown in the figure below, between the points $(0, 0)$ and $(2, \sqrt{2})$. Compute the line integral

$$\int \vec{A} \cdot d\vec{s}$$



by integrating over x.