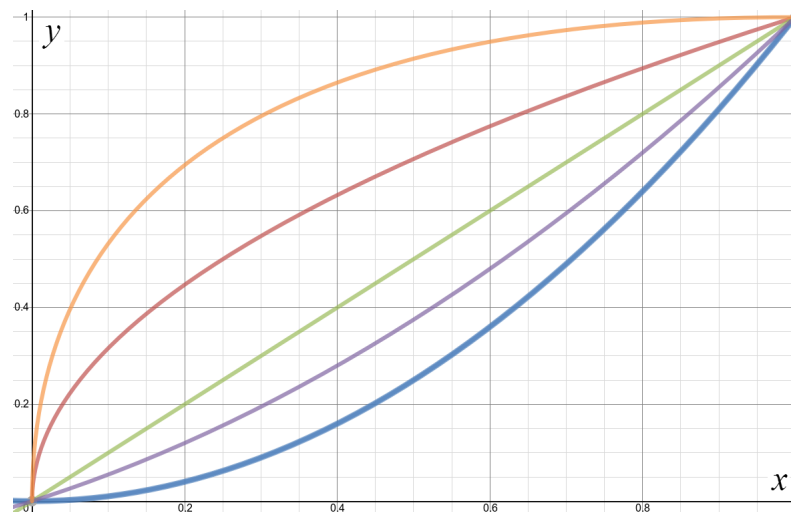


Curve match

Problem

The following five functions have been plotted accurately on the axes below.

- $y = \sqrt{x}$
- $y = x^2$
- $y = x$
- $y = \frac{x^2 + x}{2}$
- $y = 2\sqrt{x} - x$



Can you label each curve?

Imagine that you wish to plot a route between $(0,0)$ and $(1,1)$. Can you find a function that does this without intersecting any of the existing curves, except at the end points?

What other curves can you plot that intersect the existing curves only at the end points?

Based on this NRIC resource, used with permission: <http://nrich.maths.org/6493>