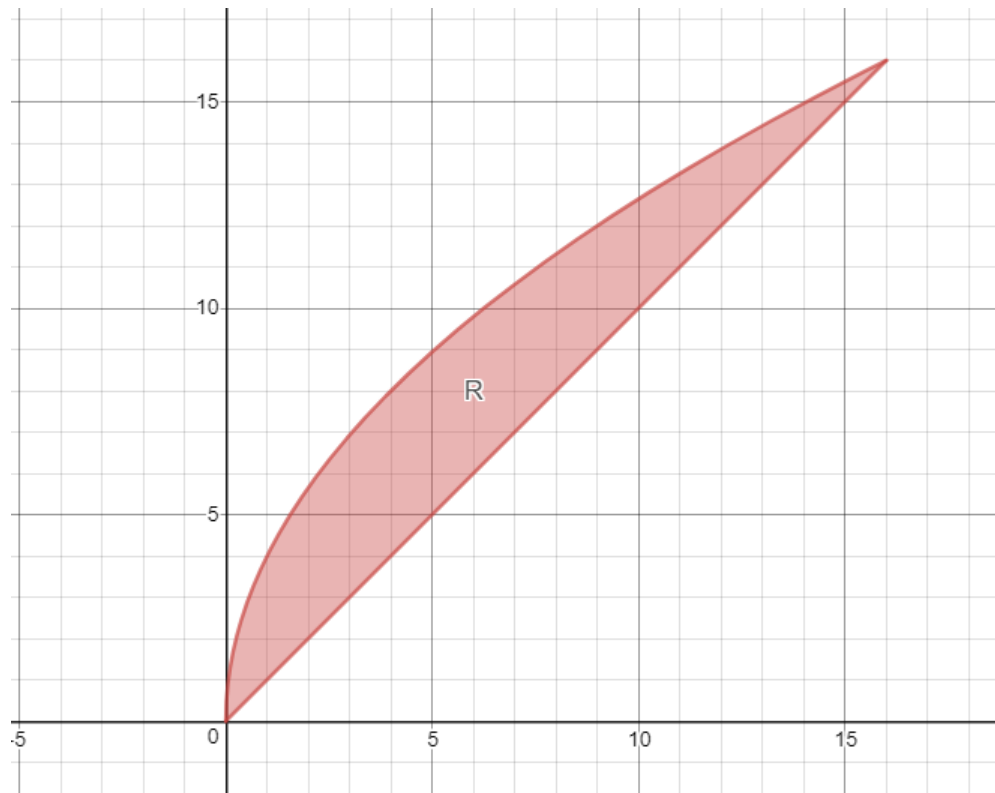


Consider the following region \mathbf{R} :

Figure 1: Region \mathbf{R}



Let the upper curve be some $f(x)$ and the bottom linear function some $h(x) = mx$ for $m \in \mathbb{R}$. Rotate the function $f(x)$ to find that the lengths of normal lines intersecting the original curve are equal to: