

14.

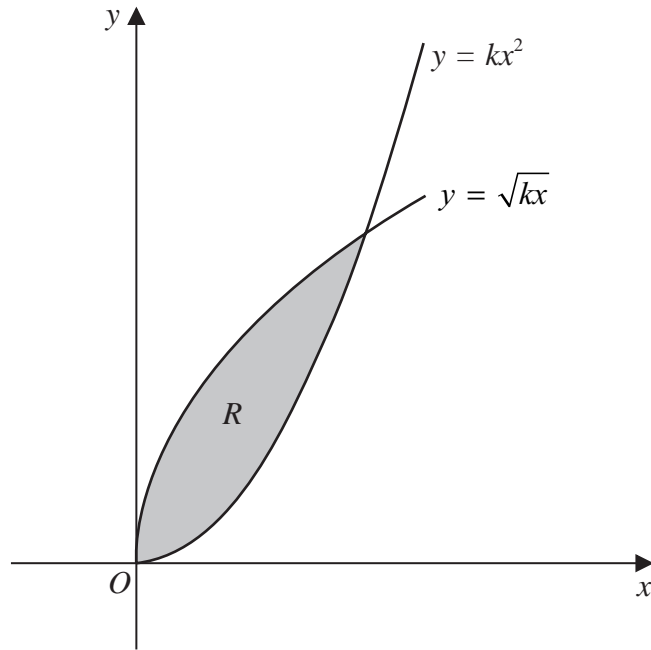


Figure 7

Figure 7 shows the curves with equations

$$y = kx^2 \quad x \geq 0$$

$$y = \sqrt{kx} \quad x \geq 0$$

where k is a positive constant.

The finite region R , shown shaded in Figure 7, is bounded by the two curves.

Show that, for all values of k , the area of R is $\frac{1}{3}$

(5)