

1991 AB2

Let R be the region between the graphs of $y = 1 + \sin(\pi x)$ and $y = x^2$ from $x = 0$ to $x = 1$.

- (a) Find the area of R .
- (b) Set up, but do not integrate an integral expression in terms of a single variable for the volume of the solid generated when R is revolved about the x -axis.
- (c) Set up, but do not integrate an integral expression in terms of a single variable for the volume of the solid generated when R is revolved about the y -axis.