

Math 182 Honors Quiz 8 Version A

1. Consider the plane region R bounded by $y = 1/x$, $y = 1/2$ and $x = 1$.

(i) Find the area of R .

(ii) Find the centroid of R .

(iii) Find the volume of revolution of R about the y axis.

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2. Consider the plane region R in the first quadrant bounded by $y = 4x - x^2$ and $y = x$.

(i) Find the area of R .

(ii) Find the perimeter of R .

3. Write down an integral for the arc length of the curve $y = \sin(x^2)$ between $x = 0$ and $x = 1$ and then approximate the arc length as a decimal.