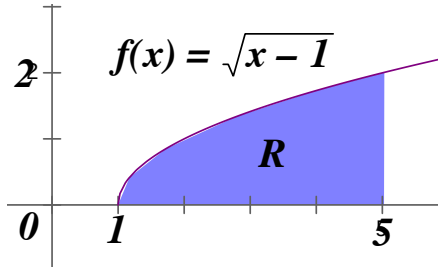


Volumes of known cross sections Name: _____

1) Let R be the region in the first quadrant under the graph of $f(x) = \sqrt{x-1}$ for $[1,5]$.



Find the volume of the solid whose base is the region R and whose cross sections cut by planes perpendicular to the x -axis (vertical cross sections) are: **(Set up all ; Calculate the squares)**

a) squares b) equilateral triangles c) semicircles

d) rectangle with height $12-x$

e) isosceles rt. triangle with hypotenuse as base

Find the volume of the solid whose base is the region R and whose cross sections cut by planes perpendicular to the y -axis (horizontal cross sections) are :

f) squares g) semicircles

2) $f(x) = 9 - x^2$ $g(x) = 3 - x$ **(Set up all ; Calculate the square)**

Find the volume of the solid whose base is the region between $f(x)$ and $g(x)$ and whose cross sections cut by planes perpendicular to the x -axis are:

a) squares b) rectangle (height = $10 \cdot$ base)

c) isosceles rt. triangle with leg as base

d) $30^\circ - 60^\circ - 90^\circ \triangle$ (Hyp. is base)