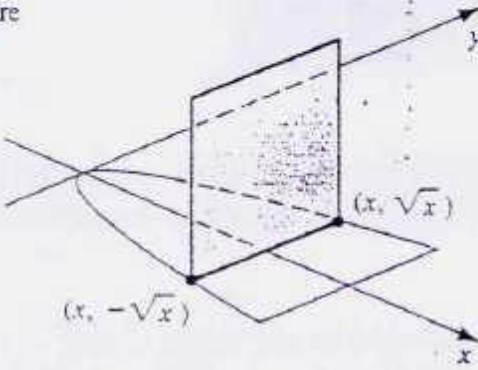


AP Calculus AB  
 Worksheet on Cross Sections

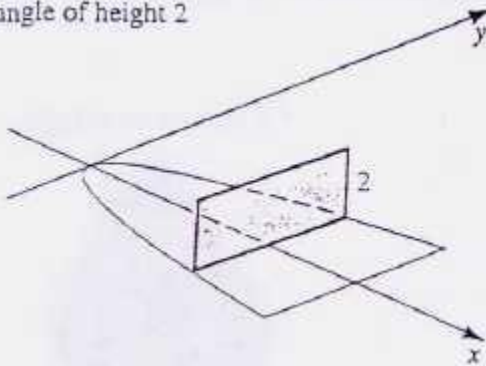
Name: \_\_\_\_\_  
 Date: \_\_\_\_\_

Exer. 1-8: Let  $R$  be the region bounded by the graphs of  $x = y^2$  and  $x = 9$ . Find the volume of the solid that has  $R$  as its base if every cross section by a plane perpendicular to the  $x$ -axis has the given shape.

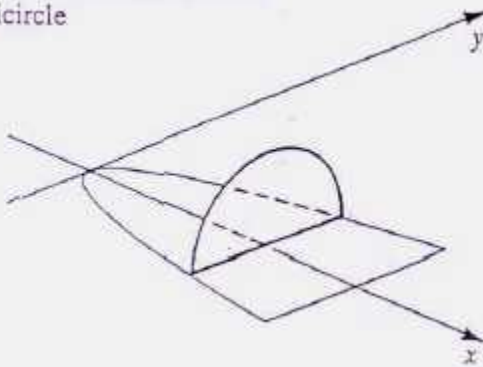
1 A square



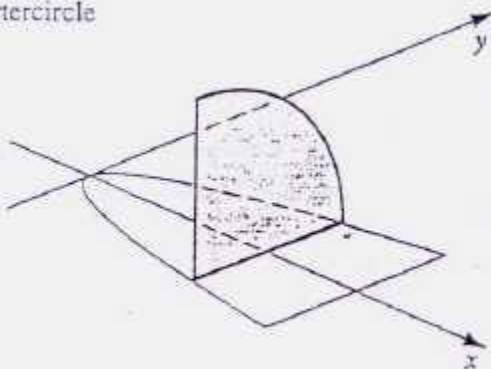
2 A rectangle of height 2



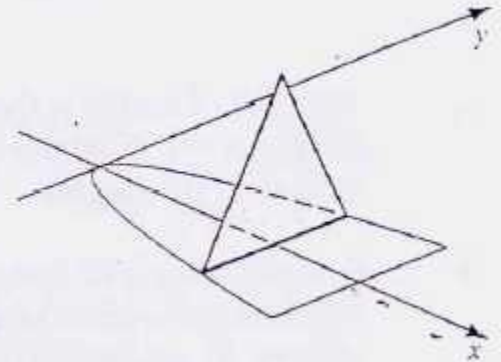
3 A semicircle



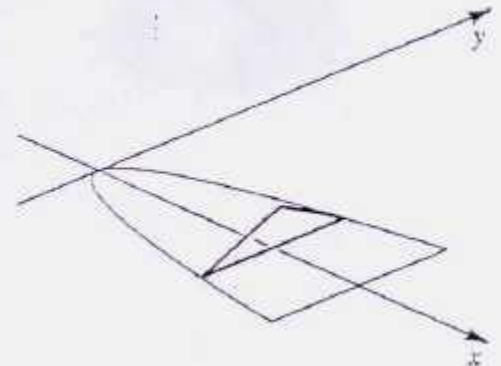
4 A quartercircle



5 An equilateral triangle



6 A triangle with height equal to  $\frac{1}{4}$  the length of the base



7 A trapezoid with lower base in the  $xy$ -plane, upper base equal to  $\frac{1}{2}$  the length of the lower base, and height equal to  $\frac{1}{4}$  the length of the lower base

