

232 Quiz 9

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

December 2, 2011

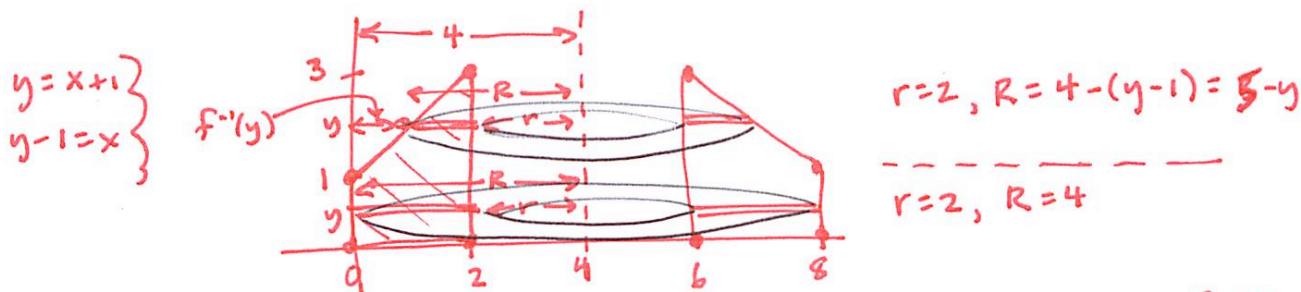
Name: \*key\* v1

Section: \_\_\_\_\_

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

Work in groups of no more than three with NO NOTEBOOKS please.

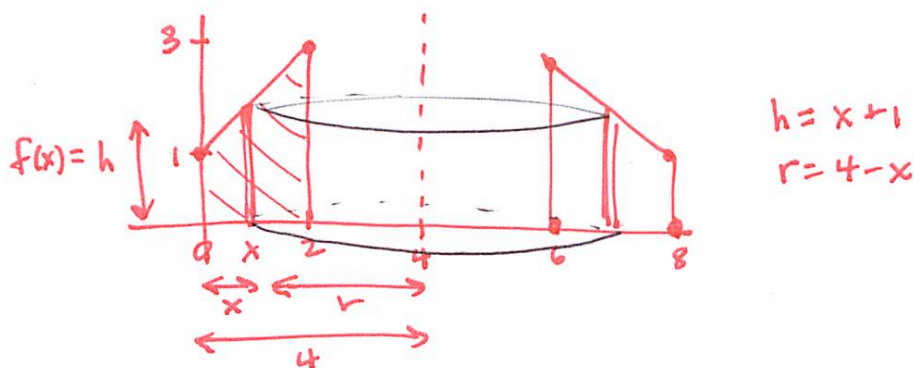
1. Consider the trapezoid-shaped region between the graph of  $f(x) = x+1$  and the  $x$ -axis on the interval from  $x = 0$  to  $x = 2$ . Set up (but do not solve) a definite integral that describes the volume of the solid obtained by revolving this region around the vertical line  $x = 4$ . You may use either discs/washers or shells, whichever you prefer. Include a clear, labeled picture of a representative disc/washer or shell.



$$\pi \int_0^1 (4^2 - 2^2) dy + \pi \int_1^3 ((5-y)^2 - 2^2) dy$$

-3 r  
 -3 R  
 -6 no split

- or -



$$2\pi \int_0^2 (4-x)(x+1) dx$$

-4 r  
 -4 h