

232 Quiz 9

Name: _____

December 2, 2011.

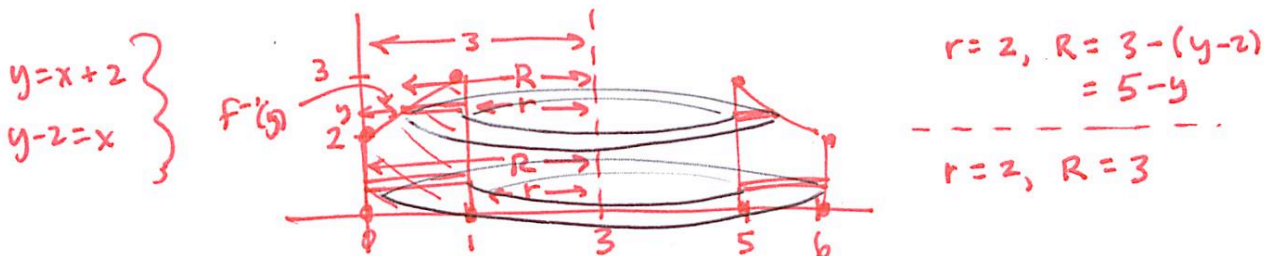
Name: * Kay * V2

Section: _____

Name: _____

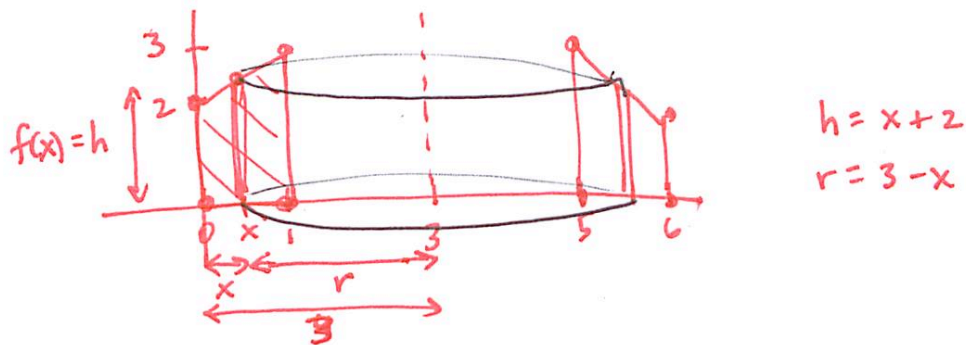
Work in groups of no more than three with NO NOTEBOOKS please.

1. Consider the trapezoid-shaped region between the graph of $f(x) = x+2$ and the x -axis on the interval from $x = 0$ to $x = 1$. 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 $x = 3$. You may use either discs/washers or shells, whichever you prefer. Include a clear, labeled picture of a representative disc/washer or shell.



$$\pi \int_0^2 (3^2 - 2^2) dy + \pi \int_2^3 ((5-y)^2 - 2^2) dy$$

- OR -



$$2\pi \int_0^1 (3-x)(x+2) dx$$