

Serial No.: _____ Student Name: _____ Student Number: _____

Instructor: M. Z. Abu-Sbeih

Math 102- Q2

Date: 30-3-2009

Problem 1: (5 points) Sketch the graph and then find the area of the region enclosed by the graphs of $x = y^2$ and $y = x - 2$

Problem 2: Consider the region R in the first quadrant bounded by the ellipse $4x^2 + 9y^2 = 36$, x - axis and the y - axis. **Set up (but do not evaluate)** a definite integral which gives the volume of the solid generated by rotating the region R about: **(Note: you may use either the disk or washer method only.)**

(i) the x - axis

(ii) the line $x = 3$

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Problem 1: (5 points) Sketch the graph and then find the area of the region enclosed by the graphs of $x = y^2$ and $y = 2 - x$

Problem 2: Consider the region R in the first quadrant bounded by the ellipse $9x^2 + 4y^2 = 36$, x - axis and the y - axis. **Set up (but do not evaluate)** a definite integral which gives the volume of the solid generated by rotating the region R about: **(Note: you may use either the disk or washer method only.)**

(i) the x - axis

(ii) the line $x = 2$