

Math 166 - Section A
February 15, 2008

Name: _____

Quiz #5a: Sections 5.6 & 5.7

Show all work in a neat and logical manner in order to get full credit.
You may use your calculator; however all answers should be exact!

15 pts.

1. Find the centroid of the region bounded by the curves $y = x^2$ and $y = 9$. If you use symmetry, explain how and why you are able to use it.

$(\bar{x}, \bar{y}) =$ _____

Don't forget the back! \Rightarrow

15 pts.

2. Given the probability distribution function

$$f(x) = \begin{cases} \frac{x^3}{64} & \text{if } 0 \leq x \leq 4 \\ 0 & \text{otherwise} \end{cases}$$

(a) Find $P(1 \leq X \leq 3)$

(b) Find $E(X)$

Points earned: _____ out of a possible 30 points