

Math 10B with Professor Stankova

Quiz 9; Tuesday, 4/2/2019

Section #206; Time: 9:30 AM

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

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Circle True or False or leave blank. (1 point for correct answer,  $-1$  for incorrect answer, 0 if left blank)

1. True    False    It is possible to determine the equation for the PDF, given the equation for the CDF.
2. True    False    Suppose that  $f(x) = x$  for  $-0.5 \leq x \leq 1.5$  and 0 everywhere else. Then  $f$  is a PDF.

Show your work and justify your answers. Please circle or box your final answer.

3. (10 points) (a) (2 points) Suppose that  $f(x) = Cx^2$  for  $-2 \leq x \leq 0$  and  $f(x) = 0$  for all other  $x$  for some constant  $C$ . If  $f$  is a PDF, then find  $C$ .

(b) (4 points) Find the CDF of  $f$  from above. (Hint: the CDF will be piecewise)

(c) (4 points) Find the mean and median of the PDF  $f$  from above.