

Math 10A with Professor Stankova

Quiz 2; Wednesday, 9/6/2017

Section #107; Time: 11 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    If  $f(x) = \sqrt{x}$ , then the domain of  $f^{-1}(x)$  is all real numbers.
2. True    False    If  $f, g$  are functions such that  $\lim_{x \rightarrow 0} f(x) = L$  and  $g$  is continuous at  $x = L$ , then we must have  $\lim_{x \rightarrow 0} g(f(x)) = g(f(0))$ .

Show your work and justify your answers.

3. (10 points) Let  $f(t) = \frac{\sqrt{t+3} - 3}{t-6}$ .
  - (a) (2 points) What is the domain of  $f$ ?

(b) (3 points) Find  $\lim_{t \rightarrow 1} f(t)$ .

(c) (5 points) Find  $\lim_{t \rightarrow 6} f(t)$ .