

Math 10A with Professor Stankova

Quiz 1; Wednesday, 8/30/2017

Section #106; Time: 10 AM

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

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Circle True or False. (1 point each)

1. True **FALSE** All functions are graphable.
2. **TRUE** False To graph  $f(-x + 1)$ , take the graph of  $f(x)$ , reflect it across the  $y$  axis, and then shift it to the right by 1.

Show your work and justify your answers.

3. (10 points) Find the domain of each of the following functions. (2 points each)

(a)  $f(x) = \sqrt{-1 - x}$ .

**Solution:**  $(-\infty, -1]$  or  $\{x : x \leq -1\}$ .

(b)  $g(x) = \sqrt{16 - x^2}$ .

**Solution:**  $[-4, 4]$  or  $\{x : -4 \leq x \leq 4\}$ .

(c)  $f + g$ .

**Solution:**  $[-4, -1]$  or  $\{x : -4 \leq x \leq -1\}$ .

(d)  $fg$ .

**Solution:**  $[-4, -1] \cup [4, \infty)$ .

(e)  $f/g$ .

**Solution:**  $(-4, -1] \cup (4, \infty)$ .