

QUIZ 1 - MATH 111

Thursday, August 31

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Consider the relation

$$R = \{(1, 5), (2, 1), (3, 5), (4, 3), (5, 7)\}.$$

(a) Find the domain of R .

(b) Find the range of R .

(c) Make an arrow diagram representing R .

(d) Is R a function? Please explain.

2. [6 points] Consider the function $f(x) = x^2 - 1$. Please, answer the following showing all details.

(a) Compute the value $f(5 + h)$ and simplify.

(b) For which values of the input x does the output equal 3?