

Math 112 - Quiz 3

August 29, 2018

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary. This quiz is worth 5 points. YOU MUST WORK INDIVIDUALLY.

1. (2 points) Find the cardinal number of each set.

(a) $C = \{x|x \text{ is a day of the week}\}$

$$n(C) = 7$$

(b) $G = \{x|x \in \mathbb{N} \text{ and } x \text{ is negative}\} = \text{Empty Set}$

$$n(G) = 0$$

2. (2 points) State whether each pair of sets is *equal*, *equivalent*, or *neither*.

(a) $\{2, 4, 6, 8\}$ $\{2, 4, 6, 8, \dots\}$

↑ **NEITHER** ↑
4 ELEMENTS INFINITELY MANY ELEMENTS

(b) $\{s, t, u, v, w\}$ $\{t, v, w, s, u\}$

SETS ARE SAME! **EQUAL & EQUIVALENT**

3. (1 point) Let $A = \{x|x \text{ is an even natural number strictly between 100 and } 120\}$. List the elements of A . Then determine $n(A)$.

$$A = \{102, 104, 106, 108, 110, 112, 114, 116, 118\}$$

$$n(A) = 9$$