Math	112 -	- Quiz	2
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January 24, 2019

$Name \_$	
	Score

Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) List all of the subsets of  $\{1, 3, 5\}$ .

2. (1 point) Let A be the set of letters of the word MISSISSIPPI. What is the only subset of A that is NOT a proper subset?

3. (1 point) Suppose that A is a set with n(A) = 10. How many subsets does A have? Do not attempt to list them.

4. (1 points) Explain why  $\{0, 1, 2, 3, 4\}$  is NOT a subset of  $\mathbb{N}$ .

Turn over.

5. (5 points) In this problem, the universal set is the set of natural numbers,  $\mathbb{N}$ . Also, let  $A = \{x | x \in \mathbb{N} \text{ and } -3 < x < 4\}$ ,

 $B = \{x | x \in \mathbb{N} \text{ and } x > 7\}, \text{ and } C = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}.$ 

(a) Write A in roster notion.

(b) Determine B'.

(c) Determine  $A \cup C$ .

(d) Determine  $B \cap C$ .

(e) Determine  $A \cap \emptyset$ .