

# Math 1303 - Math in the Liberal Arts

Quiz #6 - 2014.09.17

Solutions

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Consider the following sets:

$$S = \{x \mid x \text{ is a positive power of } 4\}$$

$$T = \{0, 2, 4, 6\}$$

$$U = \{0, 2, 4, 6, \dots\}$$

$$V = \{x \mid x \text{ is a prime number}\}$$

$$W = \{x \mid x \text{ is an integer}\}$$

$$X = \{1, 3, 5, 7, \dots\}$$

1. Is  $S \subseteq T$ ? - No.

2. Is  $S \subseteq U$ ? - Yes.

3. Is  $2 \in V$ ? - Yes.

4. Is  $U \subseteq W$ ? - Yes.

5. Is  $T = U$ ? - No.

6. Is  $V \subseteq X$ ? - No.

7. Is  $X \subseteq W$ ? - Yes.