

Name _____

Date _____

Use your knowledge of Sets and Set Theory to answer each question below.

- If $U = \{\text{whole numbers}\}$, $A = \{2, 3, 5, 7, 11\}$ and $B = \{1, 3, 5, 9\}$, then which of the following statements is true?
 - $A \subset B$
 - $B \subset A$
 - $A \subset U$**
 - A is null

- $A = \{0, 2, 4, 6, 8\}$ and $B = \{1, 3, 5, 9\}$, which of the following could be the universal set? Circle all possible answers.
 - $U = \{\text{whole numbers} < 10\}$**
 - $U = \{\text{prime numbers}\}$
 - $U = \{\text{single digits}\}$**
 - $U = \{\text{even whole numbers}\}$

- Complete each sentence below.
 - The **Universal** set is the set of all elements under consideration.
 - The **null (empty)** set is a subset of all sets.
 - Two sets A and B are **disjoint** if they have no elements in common.
 - The **complement** of set A is denoted as A' and is read as A -prime.
 - The intersection between a set and its complement is the **null (empty)** set.
 - In a **Venn diagram**, sets are represented by shapes; usually circles or ovals. The elements of a set are labeled within the circle.
 - If the universal set contains sets A and B , then A **is a subset of** U . (or \subset)
 - The **union** of a set and its complement is the universal set.