

EXERCISES ON SETS AND SET OPERATIONS

1. True or false:

- Is $a \in \{b, c, d\}$?
- Is $\{a, b, 1, \theta, c, a\}$ a set?
- Is $\emptyset \subseteq \{a, b, c\}$?
- Is $\{\emptyset\}$ a set?
- Is $\{a, b, c\} \subseteq \{a, b, c\}$?
- Is $\{a, b, c\} \subset \{a, b, c\}$?

2. What is:

- $\{x \mid \text{even}(x) \text{ and } x < 7 \text{ and } x \geq 0\}$?
- $\{x \mid \text{even}(x) \text{ and } \text{odd}(x)\}$?

3. Let $S = \{a, b, c\}$, $T = \{b, d, e\}$

What is:

- $S \cap T$?
- $S \cup T$?
- $S - T$?

4. To S and T in question 3, add $U = \{b, d, f\}$

What is:

- $\bigcap \{S, T, U\}$?
- $\bigcup \{S, T, U\}$?

ANSWERS