

## ANSWER ON QUESTION #54796 – Math – Set Theory

1. Given that  $S = \{ a, b, c, d, e \}$  and  $T = \{ a, c, e \}$ , then one of these is untrue
- (a)  $T$  is a subset of  $S$
  - (b)  $T \subseteq S$
  - (c)  $S \neq T$
  - (d)  $S \subseteq T$

**Solution:** (d) is untrue, because, for example, the element  $d \in S$ , but  $d \notin T$

2.  $A = \{x / x \text{ is an odd number between } 5 \text{ and } 21\}$  is same as

- (a)  $A = \{5, 7, 9, 11, 13, 15, 17, 19\}$
- (b)  $A = \{5, 7, 9, 11, 13, 15, 17, 19, 21\}$
- (c)  $A = \{x : x \text{ is an odd number between } 5 \text{ and } 21\}$
- (d)  $A = \{7, 9, 11, 13, 15, 17, 19, 21\}$

**Solution:** (a) and (d) are untrue.

In case (a) the number 21 is not belong to the set  $A = \{5, 7, 9, 11, 13, 15, 17, 19\}$ .

In case (d) the number 5 is not belong to the set  $A = \{7, 9, 11, 13, 15, 17, 19, 21\}$ , but 5 is an odd number between 5 and 21.