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6/07/2021

EXERCISE 10 (B)

1. If set $A = \{2, 3, 4, 5, 6\}$, state which of the following statements are true and which are false.

- i) $2 \in A$ True
- ii) $5, 6 \in A$ True
- iii) $3, 4, 7 \in A$ False
- iv) $2, 8 \in A$ False

2. If set $B = \{4, 6, 8, 10, 12, 14\}$, state which statements are correct and which are wrong. Also write the wrong statements correctly.

- i) $5 \in B$ - ^{wrong} $5 \notin B$
- ii) $12 \in B$ - Correct
- iii) $14 \in B$ - Correct
- iv) $9 \in B$ - Wrong (ans) - $9 \notin B$
- v) B is the even nos. between 2 and 16
~~True~~ ~~wrong~~ (ans) - B is the even nos. between 4 and 14.
- vi) 4, 6, and 10 are the members of set B .
Correct.

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1. Write the set containing:

- i) The first five counting numbers:
ans - $\{1, 2, 3, 4, 5\}$ is a set of five counting number.
- ii) the three types of angles:
ans - $\{right\}$ angle, acute angle, obtuse angle $\}$
- iii) The three types of triangle:
ans $\{right\}$ triangle, scalene triangle, isosceles triangle $\}$.
- iv) the members of your family:
ans $\{Salghna, Iban, myself\}$
- v) The first six consonants of English Alphabet: ans - $\{b, c, d, f, g, h\}$
- vi) The first four consonants of English Alphabet: ans - $\{a, e, i, o\}$
- vii) The names of any three Prime Minister of India: $\{Narendra\}$ Modi, Jawaharlal Nehru, Lal Bahadur Sastri $\}$

2. True or false:

- i) Sets $\{4, 9, 6, 2\}$ and $\{6, 2, 4, 9\}$ are not the same. False. They are same.
- ii) Sets $\{0, 1, 3, 9, 4\}$ and $\{4, 0, 1, 3, 9\}$

are the same. True

iii) $\{5, 4\}$ and $\{5, 4, 4, 5\}$ are not the same. True

iv) sets $\{8, 3\}$ and $\{3, 3, 8\}$ are the same. True

v) Collection of vowels used in the word 'ALLAHABAD' forms a set. False

vi) If P is the set of letters in the word 'ROOP', then $P = \{P, O, R\}$. True they are same

vii) If M is the set of letters used in the word 'MUMBAI'; then: $M = \{m, u, b, a, i\}$. True

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5. a) Write the members (elements) of each set given below:

i) $\{3, 8, 5, 15, 12, 7\}$

Ans. 3, 8, 5, 15, 12 and 7

ii) $\{c, m, n, o, s\}$

Ans. c, m, n, o and s

b) Write the sets whose elements are:

i) 2, 4, 8, 16, 64 and 128

Ans. $A = \{2, 4, 8, 16, 64, 128\}$

ii) 3, 5, 15, 45, 75 and 90

Ans. $B = \{3, 5, 15, 45, 75, 90\}$

6. ii) Write the set of vowels used in the word 'BENIGAL'.

ans - E, A, I the set of vowels in this word

ii) Write the set of letters used in the word 'BHOPAL'.

ans - B, H, O, P, A, L the set of letters

iii) Write the set of consonants used in the word 'KONIG'.

ans - K, H, G, N, I set of ~~vowels~~ letters.