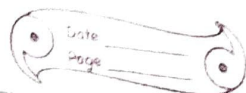


HW
6/10/21



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 of the following statements are correct and which are wrong:

- i) $5 \in B$ - False Correct - $5 \notin B$
- ii) $12 \in B$ - True
- iii) $14 \in B$ - True
- iv) $9 \in B$ - False Correct - $9 \notin B$

v) B is the set of even numbers between 2 and 16 - True

vi) 4, 6 and 10 are the members of set B.

Also, write the wrong statements correctly.

3) State whether true or false:

i) Sets $\{4, 9, 6, 2\}$ and $\{6, 2, 4, 9\}$ are not the same. - True

ii) Sets $\{0, 1, 3, 9, 4\}$ and $\{4, 0, 1, 3, 9\}$ are the same. - True

iii) Sets $\{5, 4\}$ and $\{5, 4, 4, 5\}$ are not the same. - False

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 'ROOD'; then

$$P = \{r, o, d\}$$

vii) If M is the set of letters used in the word

'MUMBAI', then:

$$M = \{m, u, b, a, i\} \text{ - True}$$

4) Write the set containing:

i) The first five counting numbers.

A: $\{1, 2, 3, 4, 5\}$

ii) The three types of angles.

A: $\{\text{acute angle, right angle, obtuse angle}\}$

iii) The three types of triangles.

$\{\text{acute-angled triangle, right-angled triangle, obtuse-angled triangle}\}$

iv) The members of your family.

$\{\text{Dillip Kumar Maharana (Father), Pramoda Maharana (Mother), Ishita Maharana (Sister), Priyanshi Maharana (Me)}\}$

v) the first six consonants of the English alphabet

~~$\{a, b, c, d, e, f\}$~~ $\{b, c, d, f, g, h\}$

vi) The first five vowels of the English alphabet

$\{a, e, i, o\}$

vii) The names of any three Prime ministers of India

$\{\text{Narendra Modi, Indira Gandhi, Manmohan Singh}\}$

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

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

A = 3, 8, 5, 15, 12 and 7

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

A = c, m, n, o and s

b) Write the sets whose elements are:

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

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

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

A = $\{3, 5, 15, 45, 75, 90\}$

6)

i) Write the set of letters used in the word 'BHOPAL'.
 $\{b, h, o, p, a, l\}$

ii) Write the set of vowels used in the word 'BENGAL'.
 $\{e, a\}$

iii) Write the set of consonants used in the word 'HONG-KONG'.

$\{h, n, g, k\}$ or $\{h, o, n, g, k, o, n, g\}$