

EX-10E

Q1) i) Given set is

$$A = \{0, 1, 2, 4\}$$

Here, the ~~card~~ cardinal no. i.e. $n(A) = 4$

ii) Given set is

$$B = \{-3, -1, 1, 3, 5, 7\}$$

Here, the cardinal no. i.e. $n(B) = 6$

~~Here~~

iii) Given set is

$$C = \{3\}$$

Here, the cardinal no. i.e. $n(C) = 1$

iv) Given set is

$$D = \{3, 2, 2, 1, 3, 6, 2\}$$

$$D = \{1, 2, 3\}$$

Here the cardinal no. i.e. $n(D) = 3$

v) Given set is

$$E = \{6, 17, 18, 11\}$$

Here, the cardinal no. i.e. $n(E) = 4$

Q2) i) Given

A = {Natural no.s less than 10}

B = {Letters of the word 'PUPPET'}

C = {squares of first four whole no.s}

D = {odd no.s. divisible by 3}

Here,

$$A = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

$$\text{Hence, } n(A) = 9$$

ii) Given

~~$$A = \{\text{Natural no.s less than } 10\}$$~~

~~$$B = \{\text{Squares of first four whole no.s}\}$$~~

~~$$B = \{P, U, E, T\}$$~~

~~$$\text{Hence, } n(A \cap B) = 4$$~~

iii) Given

~~$$A = \{\text{Natural no.s less than } 10\}$$~~

ii) Given

$$A = \{\text{Natural no.s less than } 10\}$$

$$B = \{\text{Letters of the word 'PUPPET'}\}$$

$$C = \{\text{Squares of first four whole no.s}\}$$

$$D = \{\text{Odd numbers divisible by } 2\}$$

Here,

$$B = \{\text{Letters of the word 'POPPER'}\}$$

$$B = \{P, U, E, T\}$$

$$\text{Hence, } n(B) = 4$$

iii) $A = \{\text{Natural no.s less than } 10\}$

$$B = \{\text{Letters of the word 'PUPPET'}\}$$

$$C = \{\text{Squares of first four whole no.s}\}$$

$D = \{ \text{odd no.s divisible by } 2 \}$
Here,

$C = \{ \text{squares of first four whole no.s} \}$

$C = \{ 0, 1, 4, 9 \}$
Hence, $n(C) = 4$

iv) Given

$A = \{ \text{Natural no.s less than } 10 \}$

$B = \{ \text{Letters of the word 'PUPPET'} \}$

$C = \{ \text{squares of first four whole no.s} \}$

$D = \{ \text{odd no.s divisible by } 2 \}$

$D = \{ \}$

Hence, $n(D) = 0$

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③ i) Given

If $A = \{ \emptyset \}$, then $n(A) = 0 = 1$

The statement given here is false

Correct statement :- If $A = \{ \emptyset \}$, then

$n(A) = 1$

ii) Given

$n(\emptyset) = 1$

The statement :- $n(\emptyset) = 0$

iii) Given

If $T = \{ a, l, a, h, i, b, a, h \}$ then $n(T) =$

$T = \{ a, l, h, b, a \}$

$$\text{i.e. } n(T) = 5$$

HENCE, the given statement is true.

iv) Given

$$\text{If } B = \{1, 5, 5, 15, 5, 13\}, \text{ then } n(B) = 6$$

The statement given here is false

$$B = \{1, 5, 15, 5, 13\}$$

$$\text{i.e. } n(B) = 4$$

Correct statement: If $B = \{1, 5, 5, 15, 5, 13\}$, then $n(B) = 4$