is a regular ... four month of a year ...

14.2.21

Ex-10(E)

1. Write the cardinal number of each of the following sets:

(i) $A = \{0, 1, 2, 4\}$
(ii) $B = \{-3, -1, 1, 3, 5, 7\}$
(iii) $C = \{\}$
(iv) $D = \{3, 2, a, 1, 3, 1, 2, 3\}$
(v) $E = \{$Natural numbers between 15 and 20$\}$

Solution:

i- Given set is
$A = \{0, 1, 2, 4\}$
Here the cardinal number i.e $n(A) = 4$

ii- Given set is
$B = \{-3, -1, 1, 3, 5, 7\}$
Here, the cardinal number i.e. $n(C) = 0$

iii- Given set is
$D = \{3, 2, a, 1, 3, 2\}$
$D = \{1, 2, 3\}$
Here the cardinal number i.e. $n(D) = 3$

iv-

iv- Given set is
$C = \{\}$
Here, the cardinal number i.e. $n(C) = 0$

v- Given set is
E = {Natural nubers between 15 and 20}
$E = \{16, 17, 18, 19\}$
Here, the cardinal number i.e $n(E) = 4$

vi- Given set is
F = {Whole numbers from 8 to 14}
$F = \{8, 9, 10, 11, 12, 13, 14\}$
Here, the cardinal number i.e. $n(F) = 7$.

2. Given :

A = {Natural numbers less than 10}
B = {Letters of the word 'Puppet'}
E = {Natural numbers between 15 and 20}
D = {odd numbers divisible by 2}

Solution:

i- Given

A = {Natural numbers less than 10}
B = {Letters of the word 'Puppet'}
C = {Squares of First four whole numbers}
D = {Odd numbers divisible by 2}

Here,

iii- Here,
C = {squares of first four whole numbers}
C = {0, 1, 4, 9}
Hence, n(C) = 4

iv- Here,
D = {Odd numbers divisible by 2}
D = { }
Hence, n(D) = 0

v- Here,
A = {Natural numer less than 10}
A = {1, 2, 3, 4, 5, 6, 7, 8, 9}
Hence n(A) = 9

ii- Here,
B = letters of the word 'Puppet'}
B = {P, U, E, T}
Hence, n(B) = 4

3. state true or false for each of the following. Correct the wrong statement.

(i) If A = {0}; then n(A) = 0. (ii) n(∅) = 1
(iii) If T = {a, l, a, h, b, d, h}; then n(T) = 5
(iv) If B = {1, 5, 5 1, 15, 5, 1}, then n(B) = 6.

Solution:

i- Given
If A = {0}, then n(A) = 0
The statement given here is false
Correct statement: If A = {0}, then n(A) = 1

ii- Given
$n(\emptyset) = 1$
The statement given here is false.
Correct statement: $n(\emptyset) = 0$

iii- Given:
If $T = \{a, 1, a, h, b, d, h, 3\}$, then $n(T) = 5$
$T = \{a, 1, h, b, d\}$
i.e. $n(T) = 5$
Hence, the given statement is true.

iv- Given:
If $B = \{1, 5, 51, 5, 1\}$, then $n(B) = 6$
The statement given here is false.
i.e. $n(B) = 4$
Correct statement: If $B = \{1, 5, 51, 15, 5, 1\}$, then $n(B) = 4$.