Exercise 10(E)

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

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

Ans- $n(A) = 4$

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

Ans- $n(B) = 6$

iii) $C = \{\}$

Ans- $n(C) = 0$

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

Ans- $n(D) = 3$

v) $E = \{16,17,18,19\}$

Ans- $n(E) = 4$

vi) $F = \{8,9,10,11,12,13,14\}$

Ans- $n(F) = 7$

2. Given:

A = {Natural numbers less than 10}

B = {Letters of the word 'PUPPET'}

C = {Squares of the first four whole numbers}

D = {Odd numbers divisible by 2}

Find:

i) $n(A)$

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

$n(A) = 9$

ii) $n(B)$

Ans- $B = \{p,u,e,t\}$

$n(B) = 4$

iii) $n(C)$

Ans- $C = \{0,1,4,9\}$

$n(C) = 4$

iv) $n(D)$

Ans- $D = \{\}$ or $\emptyset$

$n(D) = 0$

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

i) If $A = \{0\}$, then $n(A) = 0$.

Ans- The given statement is False
Correct statement is $n(A) = 1$

ii) $n(\emptyset) = 1$

Ans- The given statement is False.
Correct statement is $n(\emptyset) = 0$

iii) If $T = \{a, l, a, h, b, d, h\}$; then $n(T) = 5$

Ans- The given statement is True.

iv) If $B = \{1, 5, 51, 15, 5, 1\}$, then $n(B) = 6$

Ans- The given statement is False.
Correct statement is $n(B) = 4$