

MD-Dulal Hossain AM

ID: 213902116810:01

Answer to the question no: 5

There are 4000 customers in total among

* 720 customers liked product A, $n(A)$

* 4500 customers liked product B, $n(B)$

We know,

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$\Rightarrow n(A \cup B) = 720 + 450 - n(A \cap B)$$

$$(r) \Rightarrow n(A \cup B) = 1170 - n(A \cap B) \quad \text{--- (1)}$$

again that,

$$\Rightarrow n(A \cup B) \leq 1000$$

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$$\Rightarrow 1170 - n(A \cap B) \leq 1000 \quad [\text{Inequality}]$$

$$\Rightarrow -n(A \cap B) \leq 1000 - 1170$$

$$\Rightarrow n(A \cap B) \leq 170$$

\therefore Both customers that liked must number
 $i \leq 170$ Ans

MD. Dulal Hossain & GM

ID: 213902116

Answers to the question no: 6

Somebody in your class has seen a
(A)n, A foreign movie.

Assume: The domain of discourse of X
are students in your class.

(DNA)n = $\exists n \text{ seen}(n)$

Assume - The domain of Ad is course of X
are all people

① $\rightarrow (\text{DNA})n - \text{OFL} = (\text{DNA})n \text{ seen}(n)$

$\exists n \text{ at}(n, \text{class}) \text{ seen}(n) \Leftrightarrow (\text{DNA})n \in \text{at}(n, \text{class})$

grouping 0001 $\Leftrightarrow (\text{DNA})n \in$

OFL - 0001 $\Leftrightarrow (\text{DNA})n - \text{OFL} \in$

OFL $\supseteq (\text{DNA})n - \in$

OFL $\supseteq (\text{DNA})n$

medium term begin from 2020-2020 AD

- DNA OFL 21

MD. Dulal Hossain
ID: 213902116

Answers to the question no: 09

(A) Let, $f(n) = 2n + 3$

$$g(n) = -n^2 + 1$$

Now, $(fog)(n) = g(f(n))$
 $= g(-n^2 + 1)$
 $= 2(-n^2 + 1) + 3$

$$= -2n^2 + 2 + 3$$

$$\therefore fog(n) = -2n^2 + 5 \quad \underline{\text{Ans}}$$

again,
(B) $gof(n) = g(f(n))$

$$= g(2n + 3)$$

$$= -(-2n + 3)^2 + 1$$

$$= -\left\{ (-2n)^2 + 2 \cdot 2n \cdot 3 + 3^2 \right\} + 1$$

$$gof(n) = -4n^2 - 12n - 8$$

$$\therefore \underline{\text{gof}(n)}$$

MD-Dulal Hossain - 21B3902

Answer to the question no. 8

All diagonal elements $(1,1), (2,2), (3,3)$

Should be present in every Reflexive Relation.

Now, take any two relation on set $A = \{1, 2, 3\}$

$$R = \{(1,1), (2,2), (3,3), (3,2)\}$$

$$R_1 = \{(1,1), (2,1), (3,3), (3,2)\}$$

$$R_2 = \{(1,1), (2,2), (3,3), (2,3)\}$$

$$\therefore R_1 \cap R_2 = \{(1,1), (2,2), (3,3)\}$$

So we tell that If relation R_1 and R_2 on set A are reflexive the $R_1 \cap R_2$ is Reflexive.