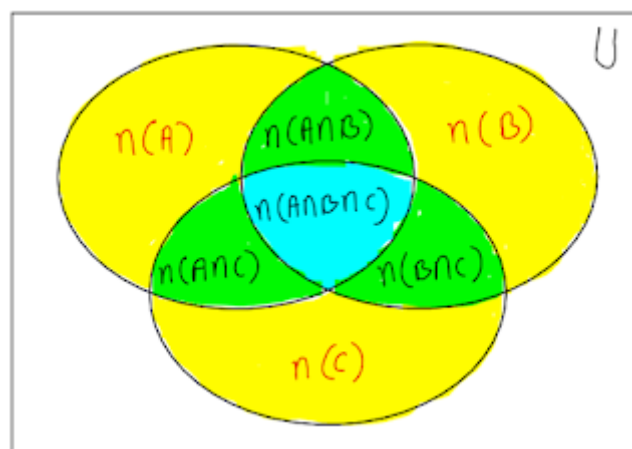


A company studies the product preferences of 20,000 consumers. It was found that each of the products A, B and C was liked by 7020, 6230 and 5980 respectively. All products were liked by 1500. Products A and B were liked by 2580, products A and C were liked by 1200 and products B and C were liked by 1950. Prove that the study results are not correct.

DAVV MBA PYQ

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Solution:



Formula:

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

Given,

$$n(A \cup B \cup C) = 20000$$

$$n(A) = 7020$$

$$n(B) = 6230$$

$$n(C) = 5980$$

$$n(A \cap B \cap C) = 1500$$

$$n(A \cap B) = 2580$$

$$n(A \cap C) = 1200$$

$$n(B \cap C) = 1950$$

A company studies the product preferences of 20,000 consumers. It was found that each

$$n(A \cup B \cup C) = 7020 + 6230 + 5980 - 2580 - 1200 - 1950 + 1500 = 15000$$

But, given $n(A \cup B \cup C) = 20000$,

So result is not correct.

$$n(A \cup B \cup C) \neq 15000$$

[Video Explanation](#)

Practice questions (DAVV MBA PYQs):

Q1. In a city there are 100000 people, 64% of them speak Greek, 55% people speak Latin, 43% people speak French, 21% people speak both Greek and Latin, 31% people speak both Greek and French, and 41% people speak both Latin and French. Determine the number of people speak all the three languages.

Solution: [Click Here](#)

Q2. In a survey of 500 T.V. viewers, 285 watched KBC, 195 watch cricket, 115 watch hockey, 45 watch KBC and hockey, 70 watch KBC and cricket, 50 watch cricket and hockey, 50 do not watch any of three games. How many watch all 3 and how many watch exactly one of three ?

Solution: [Click Here](#)

Q3. In a managers club, 45 play polo, out of which 30 play Polo only 28 play Snookers. 25 play Tennis of which 11 play Tennis only, 7 play Tennis and Polo, but not Snooker. 5 play Polo and Snooker, but not Tennis

i) How many play all the thre sports?

ii) How many play Snookers only?

iii) How many members are there is the club.

Solution: [Click Here](#)

Q4. In a town of 10000 families, it was found that 40% families buy product A, 20% buy product B and 10% buy product C, 5% buy product A and product B, 3% buy product B and product C and 4% buy product A and product C. If 2% families buy product A, B, C all. Then

A company studies the product preferences of 20,000 consumers. It was found that each

find the number of the families buy product A only.

Solution: [Click here](#)