

$$(A \cup B)' = A' \cap B'$$

Question?

$$U = \{a, b, c, d, e, f\}$$

$$A = \{b, c, d, f\}$$

$$B = \{f, b, c\}$$

$$(A \cup B)' = \{a, b, c, d, e, f\} \cup \{f, b, c\}$$

$$(A \cup B) = \{b, c, d, f\}$$

$$(A \cup B)' = U - (A \cup B)$$

$$(A \cup B)' = \{a, b, c, d, e, f\} - \{b, c, d, f\}$$

$$(A \cup B)' = \{a, e\} \quad R: H.S$$

$$A' \cap B' = U - A$$

$$A' = \{a, b, c, d, e, f\} - \{b, c, d, f\}$$

$$A' = \{a, e\}$$

$$B' = U - B$$

$$B' = \{a, b, c, d, e, f\} - \{f, b, c\}$$

$$B' = \{a, d, e\}$$

$$A' \cap B' = \{a, e\} \cap \{a, d, e\}$$

$$A' \cap B' = \{a, e\} \quad L: H.S$$

$$A \cup B' = A' \cap B'$$

$$R: H.S = L: H.S$$

Basic operations on sets

$$(A \cap B)' = A' \cup B'$$

$$U = \{a, b, c, d, e, f\}$$

$$A = \{b, d, f\}$$

$$B = \{a, b, c\}$$

Right hand side

$$A \cap B = \{b, d, f\} \cap \{a, b, c\}$$

$$A \cap B = \{b, f\}$$

$$(A \cap B)' = U - (A \cap B)$$

$$(A \cap B)' = \{a, b, c, d, e, f\} - \{b, f\}$$

$$(A \cap B)' = \{a, c, d, e\} \quad | \text{R.H.S}$$

$$A' = U - A$$

$$A' = \{a, b, c, d, e, f\} - \{b, d, f\}$$

$$A' = \{a, c, e\}$$

$$B' = U - B$$

$$B' = \{a, b, c, d, e, f\} - \{a, b, c\}$$

$$B' = \{d, e, f\}$$

$$A' \cup B' = \{a, c, e\} \cup \{d, e, f\}$$

$$A' \cup B' = \{a, c, d, e, f\} \quad | \text{L.H.S}$$

$$\text{L.H.S} = \text{R.H.S}$$

Percentages

in a parking there are 800 cars, in which 80% cars are Pakistani made? Find the no. of Pakistani cars?

Data

$$\text{No of cars} = 800$$

$$\text{Pakistani} = 80\%$$

find the no of Pakistani cars = ?

Formula = $80/100(800)$

Solution

$$\text{Pakistani cars} = 80/100(800)$$

$$\text{No of Pakistani} = 640$$

Result

$$\text{No of Pakistan cars} = 640$$

Question

no
2

on an aeroplane 400 passengers are boarded in which 52% are Pakistani, 17% Chinese, 12% Indians and rest of passengers are British.

Data

Total no of Passengers = 400

Pakistani = 52%

Chinese = 17%

Indians = 12%

No of British = ?

Solution

$$\text{Percentage} = \frac{52}{100} (400)$$

$$\text{Passenger of Pak} = 208 \quad \text{--- (i)}$$

$$\text{Passenger of Chinese} = \frac{17}{100} (400)$$

$$\text{Chinese Passenger} = 68 \quad \text{--- (ii)}$$

$$\text{Indians passenger} = \frac{12}{100} (400)$$

$$\text{Indians Passenger} = 48 \quad \text{--- (iii)}$$

No of British Passenger = ?

Total Passengers = 524 12417%

= 81%

British

100 - 81

British =

19%

Result

No of British Passenger is 19%.

Question No 3

If $\frac{1}{8}$ is decrease by 25%
we get ?

Data

if decrease = ~~1/8~~
we get 25%

Formula

$\frac{25}{100} \left(\frac{1}{8} \right)$

$\frac{1}{4} \times \frac{1}{8}$
 $\frac{1}{32}$

$$\frac{800}{25} = 32$$

Result = we get 32
when decrease $\frac{1}{8}$ of
25% -

$$\frac{1}{8} = \frac{1}{32}$$

$$\frac{32}{32} = \frac{3}{32}$$

$$= 0.093$$

when 60 is subtracted 60% of
number, the resulting no. is 60. what
is the number?

Soln

Subtracting = 60

resulting no = 60%

Final no = ?

Solution

$$60/100 (60) - 60 = (20)$$

$$\frac{6}{10} = 60 + 60$$

$$\frac{6}{10} = 120$$

$$\frac{6x}{10} = 120$$

$$6x = 120 \times 10$$

$$6x = 1200$$

$$x = \frac{1200}{6}$$

$$x = 200$$

Resulting ✓ No of boy is
200

Nadeem spend 30% of his income on food articles, 40% of the remaining on cloths, and save 50% of his salary, if his salary is 18400Rs how much does he save every month?

Data

Nadeem spend 30% on food

Nadeem spend on cloth = 40%

Save = 50%

Salary = 18400

Solution

30 / 100 (18400)
Spend on Food = 5520

Remaining salary = 5520 - 1840

$$\text{Salary} = \boxed{12880} \text{ (I)}$$

Spending on cloth = ~~4%~~ (12880)

$$= \boxed{5152}$$

Remaining money = 5152 - 12880

$$= \boxed{7738} \text{ (II)}$$

$$\text{Savings} = \frac{1}{5} \times (7738)$$

$$= \frac{1}{5} (7738)$$

$$= 3869$$

Madame save 3869

every month