

DISCRETE STRUCTURES

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Given: $A = \{a\}$ $B = \{a, b\}$ $C = \{b, c, d\}$

1. $A \cap B = \{a\}$

2. $C \cup C = \{b, c, d\}$

3. $C \times C = \{b, c, d\}$

4. $A \times B = \{a, b\}$

5. $B - C = \{a\}$

6. $A' = \{b, c, d\}$

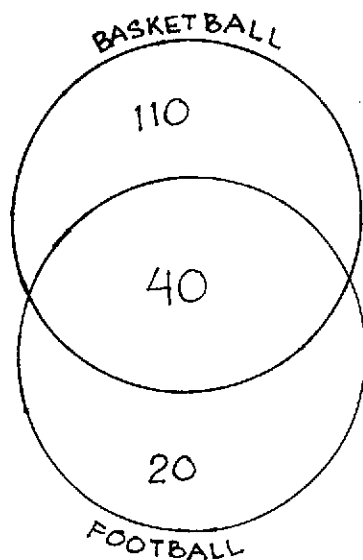
7. $B' = \{c, d\}$

8. $C' = \{a\}$

9. $A \cup B \cup C = \{a, b, c, d\}$

10. $A \cup C = \{a, b, c, d\}$

A group of FIFA tourist was asked if they really like football, basketball, or both. If 150 like basketball, 60 like football, and 40 like both games, how many tourist were there?



BASKETBALL = 150

FOOTBALL = 60

BOTH GAMES = 40

$$\begin{array}{r} 150 \text{ (Basketball)} \\ - 40 \text{ (Both games)} \\ \hline \end{array}$$

110 (only likes basketball)

$$\begin{array}{r} 60 \text{ (Football)} \\ - 40 \text{ (Both games)} \\ \hline \end{array}$$

20 (only likes football)

$$\begin{array}{r} 110 \text{ (Basketball only)} \\ + 20 \text{ (football only)} \\ + 40 \text{ (Both games)} \\ \hline \end{array}$$

170 tourists

There are a total of 170 FIFA tourists.