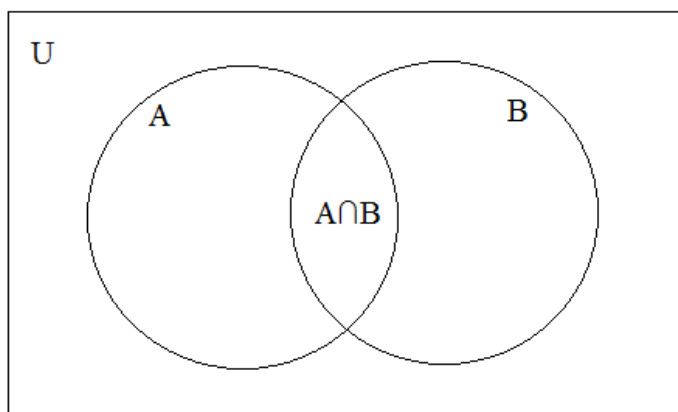


Answer on Question #82905 – Math – Statistics and Probability

Question

All the houses in a housing estate have door communication system. Twenty-two houses have door-phones and 14 have door-bells while 12 houses have both systems, find the number of houses in the estate.

Solution



How many houses have door-phones?

$$N(A) = 22$$

How many houses have door-bells?

$$N(B) = 14$$

How many houses have both systems?

$$N(A \cap B) = 12$$

How many houses are there in the estate?

$$N(U) = N(A) + N(B) - N(A \cap B)$$

$$N(U) = 22 + 14 - 12 = 24$$

There are 24 houses in the estate.

Answer: 24 houses.