

Answer on Question #46495 – Math – Statistics and Probability

The distribution of blood groups in a city is:

A : 41%; AB : 4%; B : 9%; O : 46%

An individual injured in a car accident is brought into an emergency room of the hospital

- i) What is the probability that the individual belong to blood-group type A or B or AB?
- ii) Describe the sample space and events in the above question.

Solution

- i) The probability that the individual belong to blood-group type A or B or AB is
$$P(A \text{ or } B \text{ or } AB) = P(A) + P(B) + P(AB) = 0.41 + 0.09 + 0.04 = 0.54.$$
- ii) The sample space S is given by
$$S = \{A, AB, B, O\}.$$
The events in the above question are
$$E_1 \in A \cup AB \cup B.$$