Answer on Question #48233 - 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 is: $P = P(A) + P(B) + P(AB) = 0.41 + 0.09 + 0.04 = 0.54$
ii) The sample space is a set of possible outcomes: {A, AB, B, O}.
The events are any measurable subsets of sample space, for example, the event is that the individual belongs to blood-group type A or B or AB.