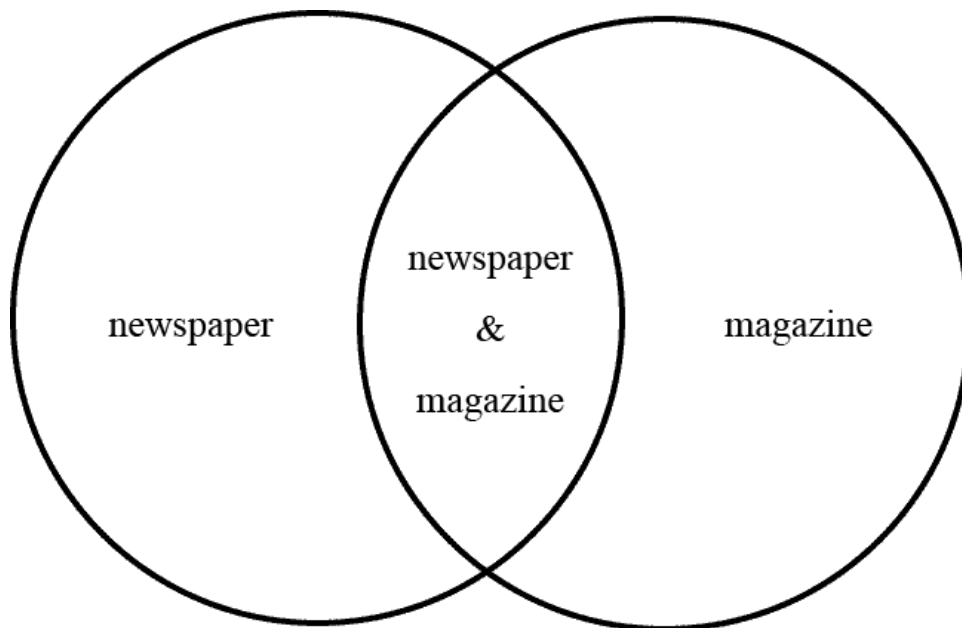Question #68584, Math / Statistics and Probability

While in a newsagents the probability that Ed buys a newspaper is 0.8

In the same newsagents the probability that Ed independently buys a magazine is 0.3

Work out the probability that Ed buys at least a newspaper or a magazine in the same newsagents. Include diagram

Solution

For independent events, the probability of a complex event is calculated as follows.

$$P(A \cap B) = P(A)P(B);$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$P(A \cap B) = 0.8 \times 0.3 = 0.24;$$

$$P(A \cup B) = 0.8 + 0.3 - 0.24 = 0.86$$

Answer: the probability that Ed buys at least a newspaper or a magazine in the same newsagents is 0.86.

Answer provided by https://www.AssignmentExpert.com