Conditional probability

Gold

Given that:

$$P(A) = 0.28 \quad P(B) = 0.55 \quad \text{and} \quad P(A \cap B) = 0.15$$

find:

a $P(A' \mid B)$

b Show that A and B are not independent.

The event C has $P(C) = 0.24$

The events A and C are mutually exclusive and the events B and C are statistically independent.

c Draw a Venn diagram to illustrate the events A, B and C, giving the probabilities for each region.

d Find $P\left(\left[A \cup B\right]'\right)$

Silver

Two independent events A and B are such that $P(A) = \frac{3}{8}$ and $P(A \cap B) = \frac{1}{16}$.

Find:

a $P(B)$

b $P(A \cup B)$

Bronze

A and *B* are two events such that $P(B \mid A) = 0.65$, $P(B \mid A') = 0.45$ and $P(A) = 0.7$.

Draw a tree diagram to represent this information.