

Section 1: Conditional probability

Exercise level 1

1. A and B are 2 events such that:

$$P(A) = 0.3$$

$$P(B) = 0.5$$

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

Find:

- (i) $P(A')$
(ii) $P(B')$
(iii) $P(A \cup B)$
2. The table shows the numbers of male and female members of a vintage car club who own either a Jaguar or a Bentley. No member owns both makes of car.

	Female	Male	Total
Jaguar	15	25	
Bentley	8	12	
Total			

- (i) Complete the table.
(ii) One person is chosen at random from these 60 members. Given that this person is male, find the probability that he owns a Jaguar.
3. In a small sixth form of 60 students Maths and English are the two most popular subjects.
24 students are studying Maths.
35 students are studying English.
15 students are studying both Maths and English.
Find the probability of a student studying English given that they study Maths.
4. A satellite TV company, to research why people chose to subscribe, undertook 35 interviews.
Of the 15 men interviewed, 10 preferred sports to films.
8 women preferred films to sports.
A person is chosen at random from those who prefer films. What is the probability that this person is a man?