Two-Way Tables and Probability

100 students each chose one activity.
(a) Copy and complete the two-way table.

	Painting	Karate	Singing	Total
Year 7		12		42
Year 8			30	
Total	27	18		100

(b) A student is chosen at random. Find the probability that they are a Year 8 who chose karate.
(c) A Year 7 student is chosen at random. Find the probability that they chose painting.

150 sixth formers visit a school canteen. Students choose burger or chilli. 59 out of the 85 students who have burger are Year 13. There are 72 Year 12 students.
(a) Draw a two-way table.
(b) A student is chosen at random from those who preferred chilli. Find the probability that they are a Year 12.

100 people study one language at an adult college. Some people study French. Some people study Spanish. The rest of the people study Italian. 54 of the people are 40 or under. 20 of the 29 people who study Spanish are over 40. 31 people study Italian. 15 over 40s study French.
(a) Draw a two-way table.
(b) A person is chosen at random. Find the probability that they are an over 40 who studies Italian.

100 people visit a leisure centre. They are either going swimming, to play tennis, to play badminton, or to the gym. 21 out of the 40 going to the gym are adults. 19 adults and 6 children are going swimming. 13 out of the 20 people playing badminton are children. Twice as many children play tennis as adults.
(a) Draw a two-way table.
(b) An adult is chosen at random. Find the probability they play badminton.