

1. Emma has 45 rabbits.

30 of the rabbits are male.

8 of the female rabbits have short hair.

12 of the rabbits with long hair are male.

(a) Use the information to complete the two-way table.

	Male	Female	Total
Long hair	12	7	19
Short hair	18	8	26
Total	30	15	45

(3)

One of Emma's rabbits is chosen at random.

(b) Write down the probability that this rabbit is a female with short hair.

8 short haired females

45 in total

$$\frac{8}{45}$$

(1)

(Total for Question 1 is 4 marks)

2. Ishmael asked 30 students at college to tell him the sport they each like the best from cricket or tennis or swimming.

11 of the 20 female students said swimming.

2 of the male students said tennis.

5 students said cricket.

The number of male students who said cricket was the same as the number of male students who said swimming.

Complete the two-way table.

$$\begin{aligned}
 x + 2 + x &= 10 & \checkmark \\
 2x + 2 &= 10 & \downarrow -2 \\
 2x &= 8 & \downarrow -2 \\
 x &= 4 & \rightarrow
 \end{aligned}
 \qquad
 \begin{aligned}
 1 + y + 11 &= 20 \\
 12 + y &= 20 & \downarrow -12 \\
 y &= 8 & \downarrow -12
 \end{aligned}$$

	Cricket	Tennis	Swimming	Total
Male students	4	2	4	10
Female students	1	8	11	20
Total	5	10	15	30

(Total for Question is 3 marks)