3.19 Frequency Trees: 10-minute Pack

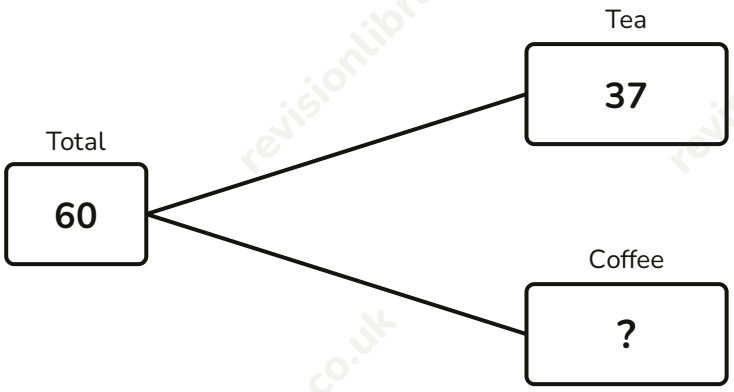
EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Priya asked 60 people whether they prefer tea or coffee. 37 of them said they prefer tea. The frequency tree below shows this information.



(a) Complete the frequency tree by working out the number of people who prefer coffee. **(2)**

(b) One of the 60 people is chosen at random. Write down the probability that this person prefers coffee. Give your answer as a fraction. **(1)**

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(Total for Question 1 is 3 marks)

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2 A frequency tree shows that of the 40 pupils in drama, 10 are in year 7 and 30 are in year 8. Work out the probability that a pupil chosen at random is in drama and in year 7.

(Total for Question 2 is 2 marks)

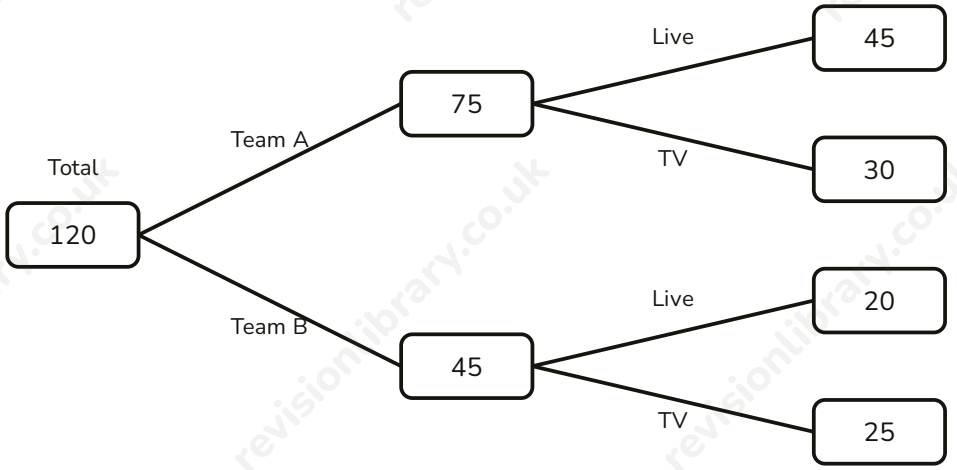
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3 Complete this step in a frequency tree. There are 60 people. 25 are female and 35 are male. Of the 25 females, 15 like football and 10 do not.
Write down the frequency for females who like football and the probability of picking a female who likes football.

(Total for Question 3 is 2 marks)

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4 A survey of 120 sports fans recorded which team they support and how they watched the last match. The completed frequency tree is shown below: Total = 120; Team A = 75 (Live = 45, TV = 30); Team B = 45 (Live = 20, TV = 25). Show that the total number of fans who watched the match on TV is 55.



(Total for Question 4 is 2 marks)

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Mark scheme · 3.19 Frequency Trees: 10-minute Pack

Question 1

(a) 60 - 37	**M1**
(a) 23 cao	**A1**

(a) Answer: 23

(b) 23/60 oe (follow through from part a)	**B1ft**

(b) Answer: 23/60

Question 2

use frequency 10 out of total 60 oe	**M1**
10/60 = 1/6 cao	**A1**

Answer: 1/6 (i.e. 10/60 = 1/6).

Question 3

frequency 15 cao	**B1**
probability 15/60 = 1/4 cao	**B1**

Answer: Frequency 15. Probability 15/60 = 1/4.

Question 4

30 + 25	**M1**
= 55 cso (both figures 30 and 25 must be identified from the tree)	**A1**

Answer: 55

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