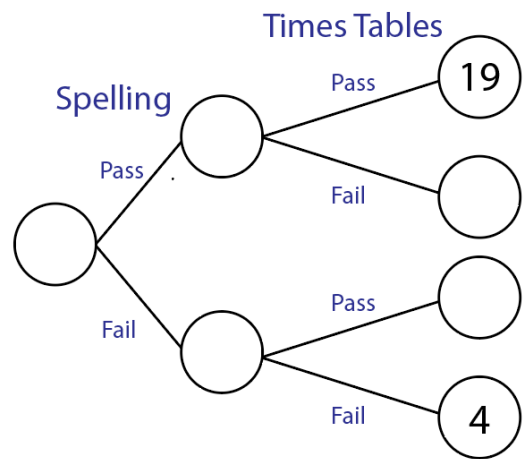


Frequency Trees

Q1 30 students took a Spelling test and a Times Tables test. 23 of the students passed the Spelling test.

- a) Use this information to complete the frequency tree.
- b) Write down the number of students that passed the Times Tables test.



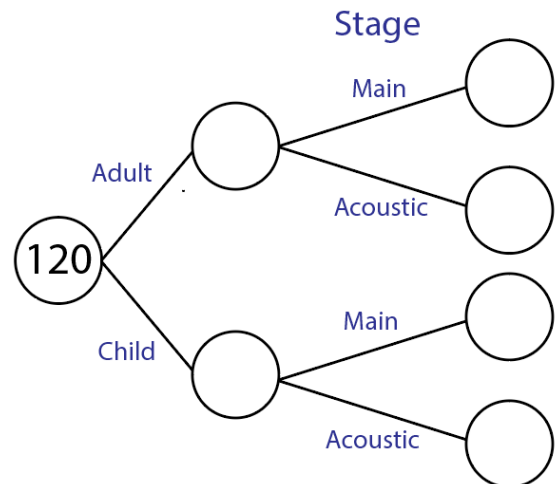
Q2 120 festival-goers were asked if they prefer the Main Stage or the Acoustic Stage.

- 58 of the people were adults.
- 35 of the children preferred the Main Stage.
- 65 of the people preferred the Acoustic Stage.

a) Complete the frequency tree.

One of the 120 people is chosen at random.

b) Write down the probability that this person is a child and preferred the Main Stage.



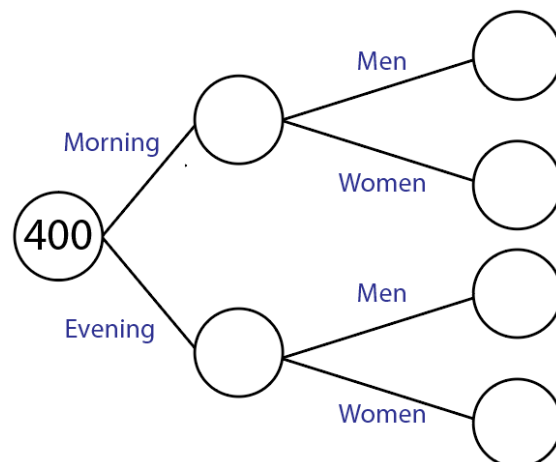
Q3 400 gym members were surveyed. Members attend either Morning or Evening classes.

- 53 of the members attend Morning classes.
- 26 men attend Morning classes.
- 183 of the members are men.

a) Complete the frequency tree.

One of the members who attend Morning classes is chosen at random.

b) Write down the probability that this person is a woman.



Scan for more questions



More exam-style questions with worked solutions and a full teaching guide for this lesson at mr-mathematics.com/drawing-frequency-trees-for-gcse-maths/



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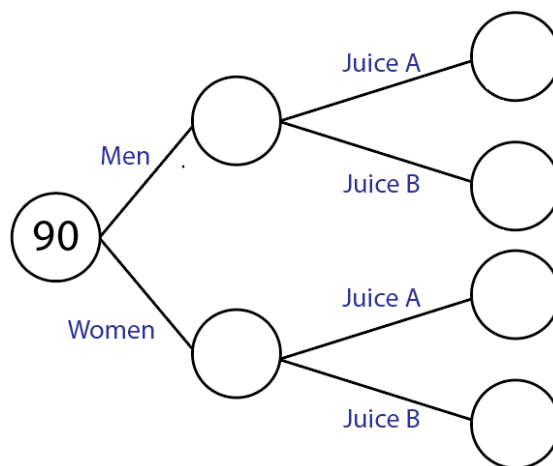
Q4 Priya makes a new fruit juice. She asks 90 people if they prefer Juice A or Juice B.

- 39 of the people asked were men.
- 23 of the 50 people that prefer Juice A are women.

a) Complete the frequency tree.

One of the 90 people is chosen at random.

b) Write down the probability that this person is a man and preferred Juice A.



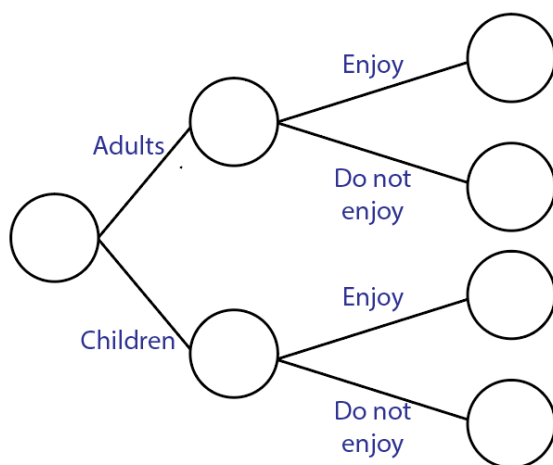
Q5 80 people were asked if they enjoy swimming.

- 38 of these people were adults, the rest were children.
- 9 of the adults do not enjoy swimming.
- 62 of the 80 people enjoy swimming.

a) Complete the frequency tree.

One of the people who do not enjoy swimming is chosen at random.

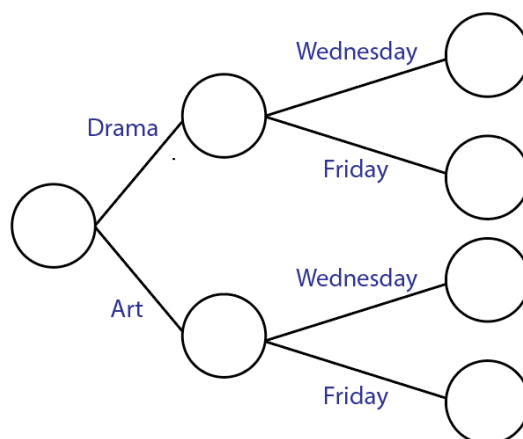
b) Write down the probability that this person is an adult.



Q6 75 students go to either a Drama club or an Art club after school. Each student attends their club on Wednesday or Friday.

- 50 of the students go to a Drama club.
- $\frac{3}{5}$ of the students that go to a Drama club go on Friday.
- 46 students go to their club on Friday.

Complete the frequency tree.



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Solutions

- Q1** Spelling pass 23 → Times Tables pass 19, fail 4 (23–19); fail 7 → pass 3 (7–4), fail 4.
b) Times Tables pass = $19+3 = 22$
- Q2** Adult 58, child 62. Child Main 35 → child Acoustic 27 (62–35).
Total Acoustic 65 → adult Acoustic 38 (65–27) → adult Main 20 (58–38).
b) $P = 35/120 = 7/24$
- Q3** Morning 53, Evening 347. Morning men 26 → Morning women 27 (53–26).
Total men 183 → Evening men 157 (183–26) → Evening women 190 (347–157).
b) $P = 27/53$
- Q4** Men 39, women 51. Juice A 50, women-A 23 → men-A 27 (50–23) → men-B 12 (39–27) → women-B 28 (51–23). Check: $12+28=40$, $50+40=90$
b) $P = 27/90 = 3/10$
- Q5** Adults 38, children 42. Adults not-enjoy 9 → adults enjoy 29 (38–9).
Total enjoy 62 → children enjoy 33 (62–29) → children not-enjoy 9 (42–33).
b) Not-enjoy total = $9+9 = 18$. $P = 9/18 = 1/2$
- Q6** Drama 50, Art 25. Drama Friday = $3/5 \times 50 = 30$ → Drama Wednesday 20 (50–30).
Total Friday 46 → Art Friday 16 (46–30) → Art Wednesday 9 (25–16).

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