Name: SOLUTIONS

GCSE (1 - 9)

Conditional Probability

Buy me a coffee

Solutions by
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They contain exam questions from up until the ***November 2021*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk
These worksheets were made using examq.co.uk

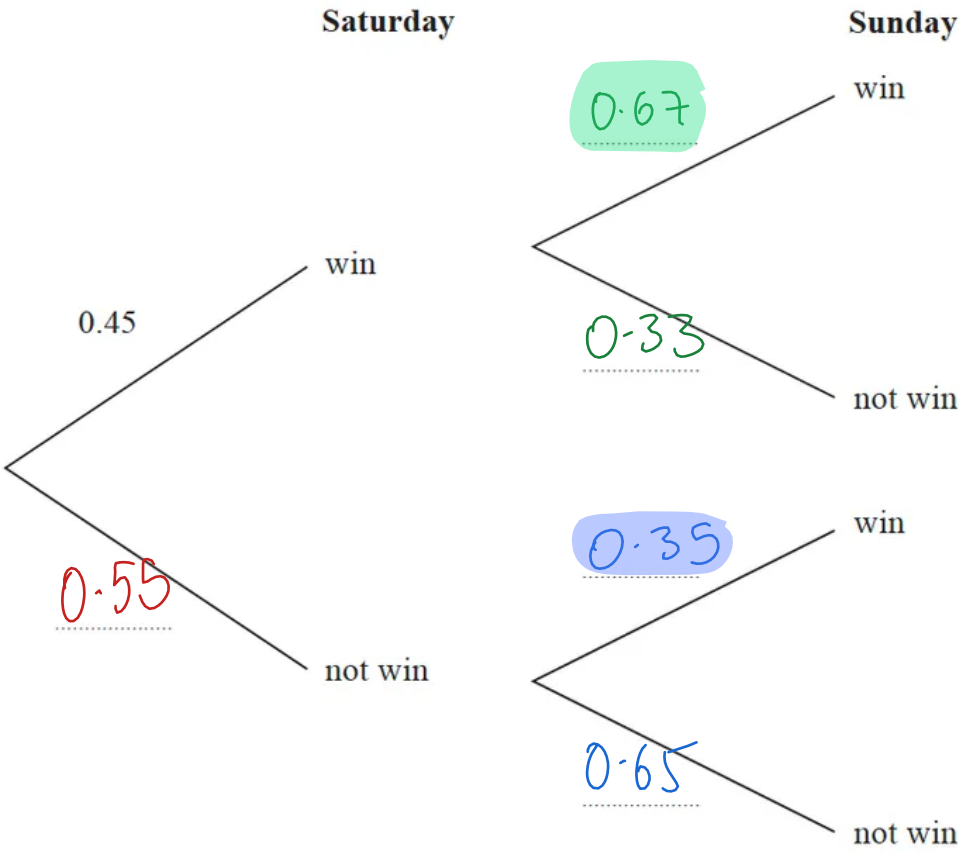
Question	Where the question appeared
1	Edexcel, GCSE, Summer 2018, Paper 2H, Q15
2	Edexcel, GCSE, Summer 2018, Paper 3H, Q20
3	Edexcel, GCSE, Summer 2017, Paper 2H, Q12

1

A darts team is going to play a match on Saturday and on Sunday.
The probability that the team will win on Saturday is 0.45

If they win on Saturday, the probability that they will win on Sunday is 0.67
If they do **not** win on Saturday, the probability that they will win on Sunday is 0.35

(a) Complete the probability tree diagram.



(2)

(b) Find the probability that the team will win exactly one of the two matches.

$P(WL) = 0.45 \times 0.33 = 0.1485$

$P(LW) = 0.55 \times 0.35 = 0.1925$

0.3410

0.341

(3)

(Total for Question 15 is 5 marks)

[Edexcel, GCSE, Summer 2018, Paper 2H, Q15]

2

50 people were asked if they speak French or German or Spanish.

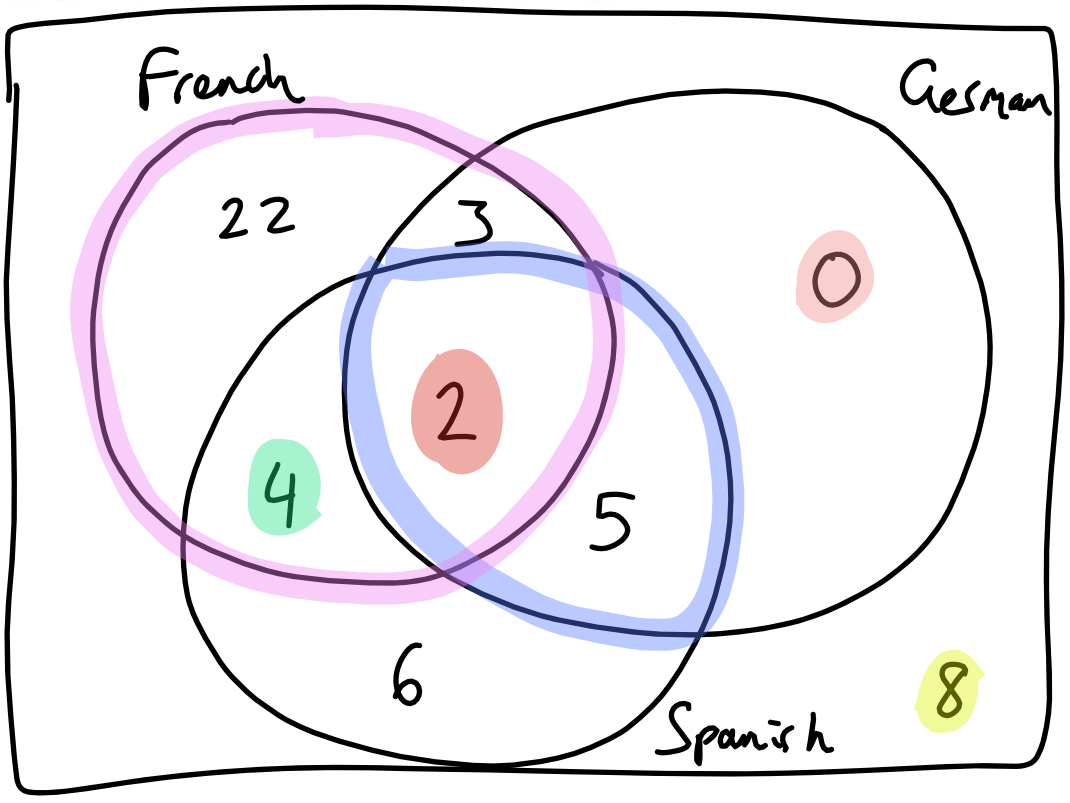
Of these people,

31 speak French
2 speak French, German and Spanish
4 speak French and Spanish but not German
7 speak German and Spanish
8 do not speak any of the languages
all 10 people who speak German speak at least one other language

so zero speak just German.

Two of the 50 people are chosen at random.

Work out the probability that they both only speak Spanish.



Spanish = 4 + 2 + 5 + 6 = 17

$$P(SS) = \frac{17}{50} \times \frac{16}{49} = \frac{136}{1225}$$

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(Total for Question 20 is 5 marks)

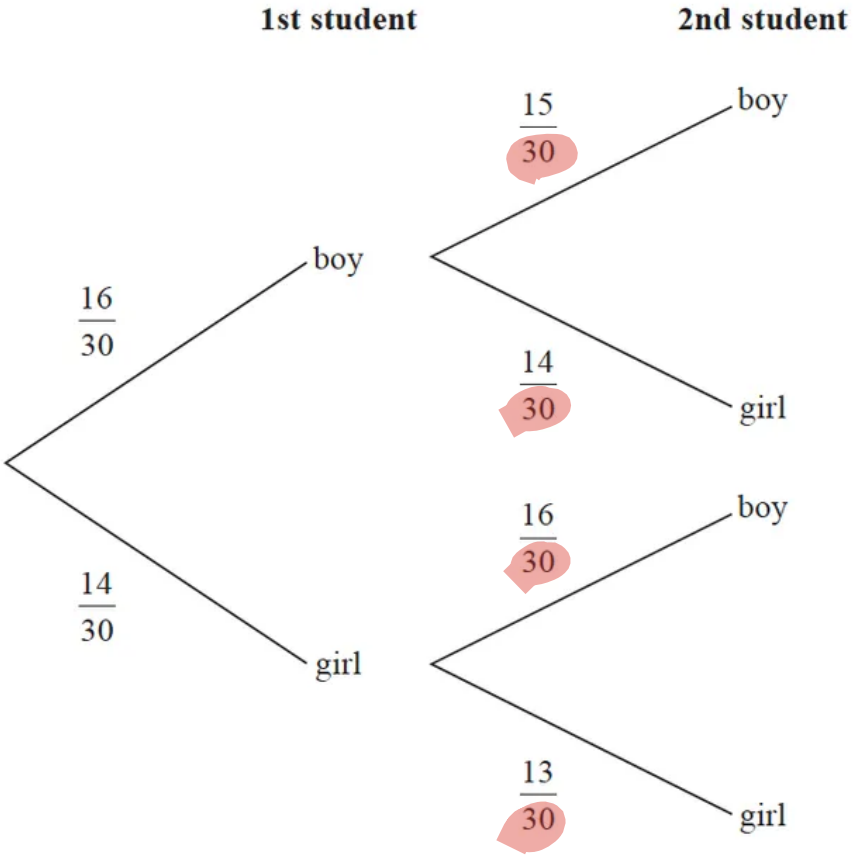
[Edexcel, GCSE, Summer 2018, Paper 3H, Q20]

3

There are 30 students in Mr Lear's class.
16 of the students are boys.

Two students from the class are chosen at random.

Mr Lear draws this probability tree diagram for this information.



(a) Write down **one** thing that is wrong with the probabilities in the probability tree diagram.

The denominators on the second branch should be 29

(1)

Owen and Wasim play for the school football team.

The probability that Owen will score a goal in the next match is 0.4
The probability that Wasim will score a goal in the next match is 0.25

Mr Slater says,

"The probability that both boys will score a goal in the next match is 0.4 + 0.25"

(b) Is Mr Slater right?
Give a reason for your answer.

No. The probabilities should be multiplied. 0.4×0.25

(1)

(Total for Question 12 is 2 marks)

[Edexcel, GCSE, Summer 2017, Paper 2H, Q12]