AQA – Probability – GCSE 2022 Mathematics

1. June/2022/Paper_8300/1F/No.5

   After school, Priya will

   - go running (R)

   - do her homework (H)

   - play a video game (V).

   Complete the list of the 6 possible orders in which she could do them.

   [2 marks]

RHV

2. June/2022/Paper_8300/1F/No.15

In a bag there are only red discs, blue discs and green discs.

There are 10 red discs.

When one disc is picked at random

$$P(red) = \frac{1}{8}$$

$$P(blue) = \frac{2}{5}$$

How many **green** discs are in the bag?

[4 marks]

Answer _____

3. June/2022/Paper_8300/1F/No.20

In a group of 98 students

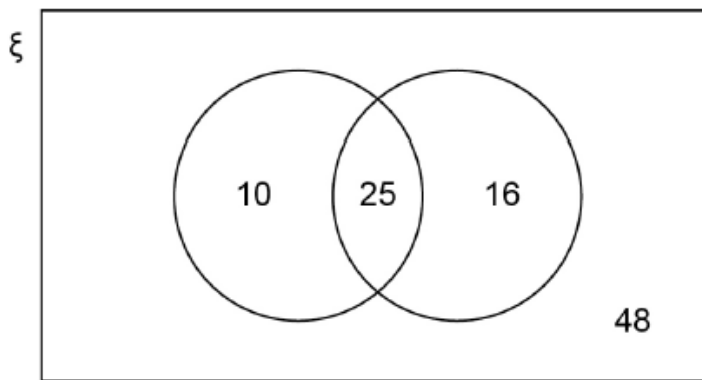25 study both Art and French

10 study Art but do not study French

41 study French.

Joel draws this Venn diagram to represent the information.

ξ = the group of 98 students

A = the students who study Art

F = the students who study French

Make **two** criticisms of his diagram.

[2 marks]

Criticism 1 _____

_____

Criticism 2 _____

_____

3

4. June/2022/Paper_8300/1H/No.7

In a group of 98 students

           25 study both Art and French

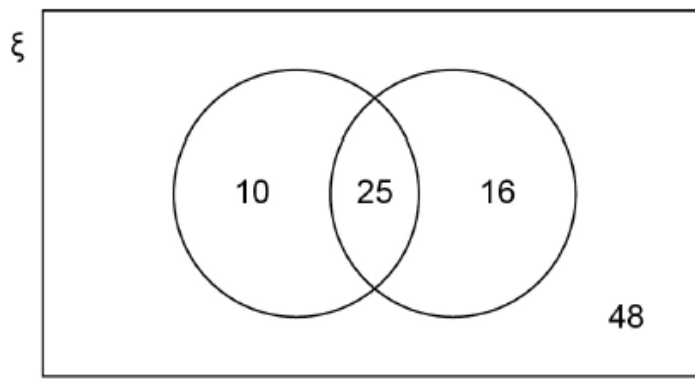   10 study Art but do not study French

           41 study French.

Joel draws this Venn diagram to represent the information.

ξ = the group of 98 students

A = the students who study Art

F = the students who study French

Make **two** criticisms of his diagram.

[2 marks]

Criticism 1 _____

_____

Criticism 2 _____

_____

5. June/2022/Paper_8300/1H/No.12

In a game, two bags, A and B, contain cards.

Each card is marked Yes or No.

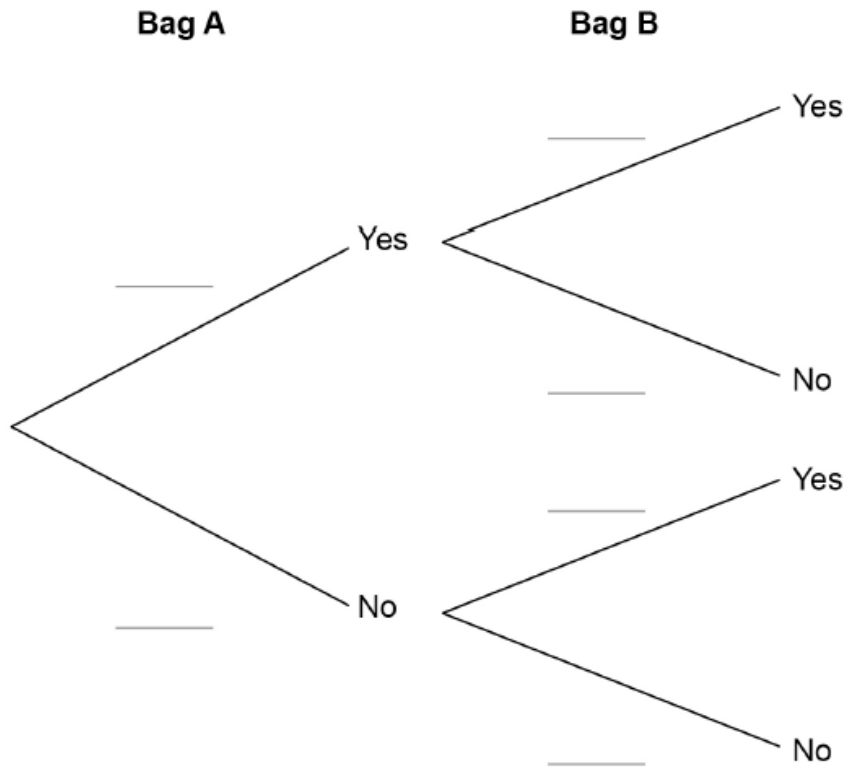The table shows the number of each type of card in the bags.

	Yes	No
Bag A	3	2
Bag B	1	9

In the game, a player picks one card at random from each bag.

The cards are then put back into the bags.

(a) Complete the tree diagram.

[2 marks]

(b)   To win a prize, a player must pick two cards marked Yes.

450 people each play the game once.

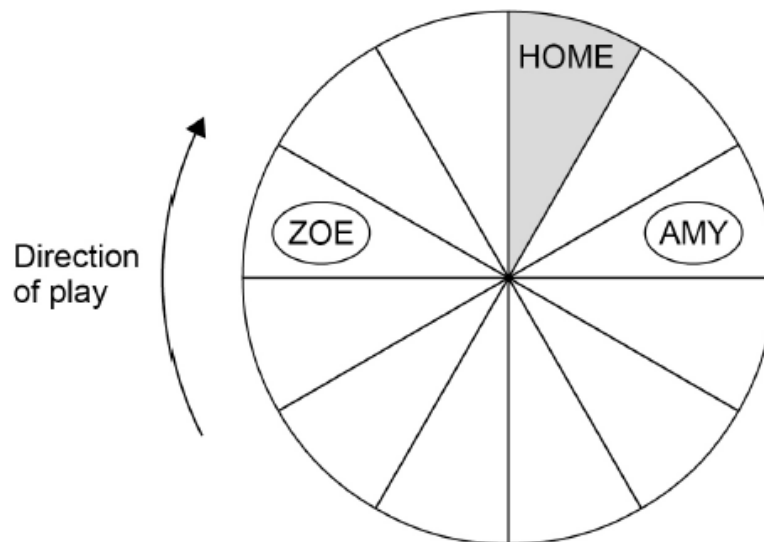How many people are expected to win a prize?

[3 marks]

_____

_____

_____

_____

_____

_____

_____

Answer _____

6. June/2022/Paper_8300/1H/No.26

Zoe and Amy are playing a board game.

- They each have one disc and take turns to roll a fair, ordinary dice.
- The player moves their disc **clockwise** the number of spaces shown on the dice.
- The winner is the first player whose disc is on HOME at the end of a turn.

Here is the board after Amy's turn.

HOME

ZOE

AMY

Direction of play

Work out the probability that Zoe wins within her next two turns.

[4 marks]