



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Venn Diagram & 2 way
table

Question Paper

"We will help you to

achieve A Star "



Question 1

A number is chosen at random from the universal set, \mathcal{E} .

(b) What is the probability that the number is in the set $A \cup B$?

[2 marks]

Question 2

One of the children is picked at random.

(b) Write down the probability that this child walked to school that day.

[1 mark]

Question 3

One of the numbers in the diagram is chosen at random.

(b) Find the probability that the number is in set A'

[2 marks]

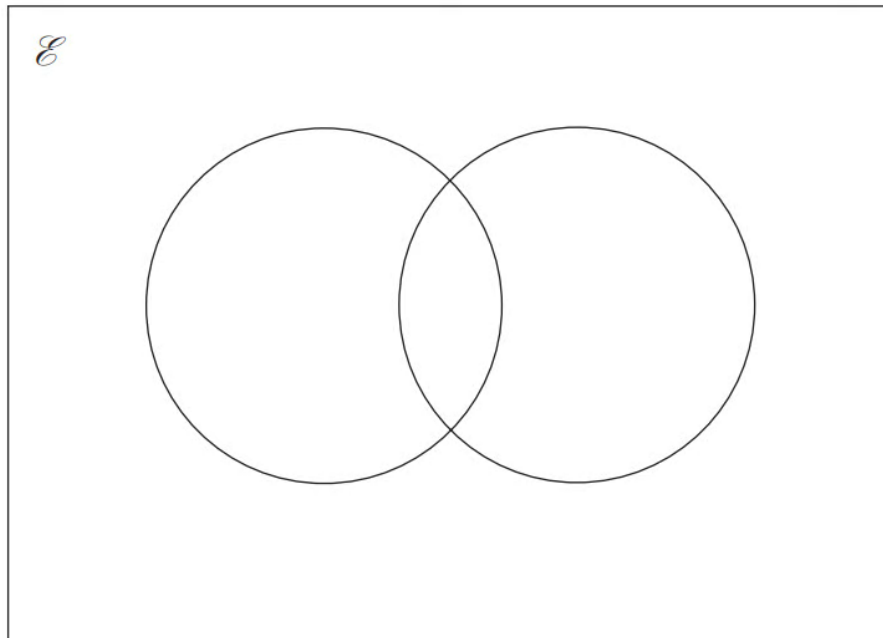
Question 4

$$\mathcal{E} = \{\text{odd numbers less than } 30\}$$

$$A = \{3, 9, 15, 21, 27\}$$

$$B = \{5, 15, 25\}$$

(a) Complete the Venn diagram to represent this information.



[4 marks]



Question 5

The two-way table gives some information about how 100 children travelled to school one day.

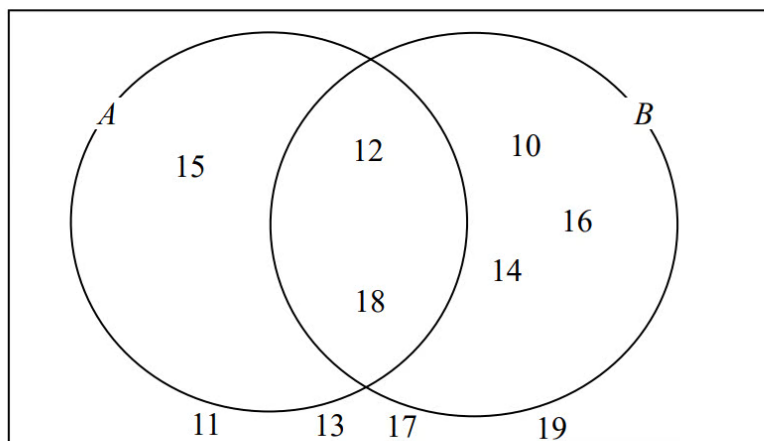
	Walk	Car	Other	Total
Boy	15		14	54
Girl		8	16	
Total	37		30	100

(a) Complete the two-way table.

[3 marks]

Question 6

Here is a Venn diagram.



(a) Write down the numbers that are in set

(i) $A \cup B$

(ii) $A \cap B$

[2 marks]



Question 7

Ali asked 200 students which sport they like best.
They could choose swimming or tennis or athletics.

The two-way table shows some information about their answers.

	Swimming	Tennis	Athletics	Total
Female			19	
Male	36	42		
Total	79		54	200

Complete the two-way table.

[3 marks]



Question 8

Milk is sold in $\frac{1}{2}$ pint bottles, in 1 pint bottles and in 2 pint bottles.

One weekend a shop sold 100 bottles of milk.

46 of the bottles were sold on Sunday.

15 of the bottles sold on Sunday were 2 pint bottles.

31 of the bottles sold on Saturday were $\frac{1}{2}$ pint bottles.

22 of the bottles sold were 2 pint bottles.

30 of the bottles sold were 1 pint bottles.

How many 1 pint bottles were sold on Sunday?

[4 marks]

Question 9

Sami asked 50 people which drinks they liked from tea, coffee and milk.

All 50 people like at least one of the drinks

19 people like all three drinks.

16 people like tea and coffee but do **not** like milk.

21 people like coffee and milk.

24 people like tea and milk.

40 people like coffee.

1 person likes only milk.

Sami selects at random one of the 50 people.

(a) Work out the probability that this person likes tea.

[4 marks]



Question 10

60 people were asked if they prefer to go on holiday in Britain or in Spain or in Italy.

38 of the people were male.

11 of the 32 people who said Britain were female.

8 males said Italy.

12 people said Spain.

One of the females is chosen at random.

What is the probability that this female said Spain?

[4 marks]

Question 11

50 people each did one activity at a sports centre.

Some of the people went swimming.

Some of the people played squash.

The rest of the people used the gym.

21 of the people were female.

6 of the 8 people who played squash were male.

18 of the people used the gym.

9 males went swimming.

Work out the number of females who used the gym.

[4 marks]



Question 12

66 people went on a day trip.

Each person did only one activity on the trip.

Each person went skating or went to an art gallery or went bowling.

43 of the people are female.

4 of the 10 people who went skating are male.

20 of the people went to the art gallery.

10 males went bowling.

Work out the number of females who went to the art gallery.

[4 marks]

Question 13

(b) Given that the person selected at random from the 50 people likes tea, find the probability that this person also likes exactly one other drink.

[2 marks]



Question 14

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

Two of the 50 people are chosen at random.

Work out the probability that they both only speak Spanish.

[5 marks]