Probability – 2024 O Level Math D 4024

1. June/2024/Paper_ 4024/11/No.5

   The table shows information about a class of 28 students and the distances they live from their school.

	Boys	Girls
Distance of 1 km or less	11	
Distance of more than 1 km	3	6

   (a) Complete the table. [1]

   (b) A student is chosen at random from the class.

   Write down the probability that the student lives more than 1 km from the school.

   .... [1]

2. June/2024/Paper_ 4024/12/No.13

   Kamal records the number of phone calls he receives at work each day for 20 days.
   The results are shown in the table.

Number of phone calls	0 to 5	6 to 10	11 to 15	16 or more
Frequency	9	5	4	2

   (a) Find the relative frequency of Kamal receiving 0 to 5 phone calls at work in one day.

   .... [1]

   (b) Kamal works for 160 days.

   Find the number of these days Kamal would expect to receive 11 or more phone calls at work.

   .... [2]

3. June/2024/Paper_ 4024/21/No.11

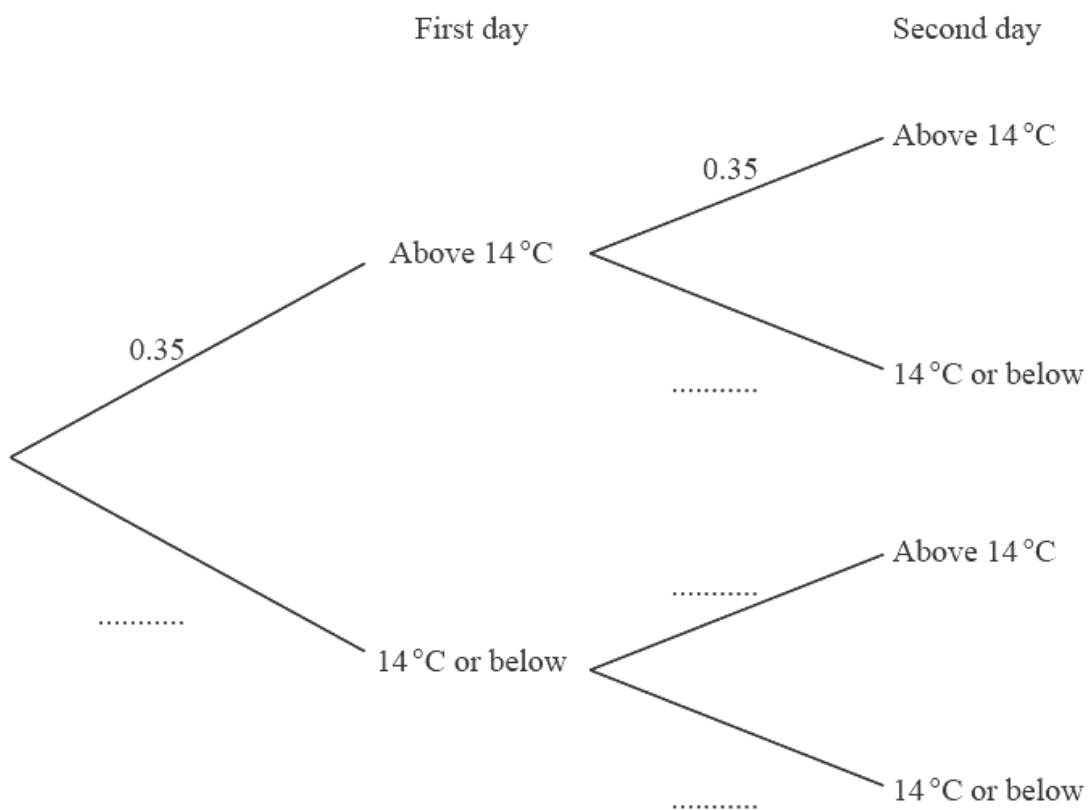(a) On any day in January, the probability the temperature at a weather station is above 14 °C is 0.35 .

(i) There are 31 days in January.

Find the number of days in January when you would expect the temperature to be above 14 °C.

.... [1]

(ii) The temperature on two consecutive days in January is recorded.

(a) Complete the tree diagram.

First day   Second day

0.35 — Above 14 °C

Above 14 °C

0.35

.... — 14 °C or below

.... — Above 14 °C

14 °C or below

.... — 14 °C or below

[2]

(b) Find the probability that the temperature is above 14 °C on both days.

.... [1]

2

(c) Find the probability that the temperature is above 14 °C on only one of the two days.

.... [2]
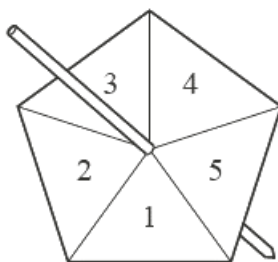
(b) In a group of 14 children:

- 8 wear red T-shirts
- 1 wears a green T-shirt
- 5 wear blue T-shirts.

Two children are chosen from the group at random.

Find the probability that they wear different coloured T-shirts.

.... [3]

4. June/2024/Paper_ 4024/22/No.2

The diagram shows a fair spinner numbered from 1 to 5.
The score is the number the spinner lands on.

(a) The spinner is spun once.

Find the probability that the score is

(i) 3

.... [1]

(ii) even.

.... [1]

(b) The spinner is spun twice.
The two scores are added together.

(i) Complete the possibility diagram to show all the outcomes.

First spin

+	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6		
4					
5					

Second spin (label for rows)

[2]

(ii) Find the probability that the outcome is 4.

.... [1]

(iii) Find the probability that the outcome is greater than 6.

.... [2]