4024 Mathematics Paper 1 - Probability

Topical questions | 5 questions

1. Question | 4024 May-June 2025 P1 V2 Q2

2 A bag contains 11 balls.
There are 5 blue balls and 4 yellow balls.
The rest of the balls are green.
A ball is taken from the bag at random.

Find the probability that the ball is

(a) yellow

..... [1]

(b) **not** blue.

..... [1]

2. Question | 4024 May-June 2025 P1 V3 Q10

10 A spinner can land on red, green, yellow or blue.
The table shows the probability of each outcome.

Colour	Red	Green	Yellow	Blue
Probability	0.35	0.2	0.15	0.4

(a) One of the values in the table is incorrect.

Explain how you know this.

.....

..... [1]

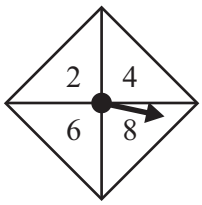
(b) The probability of the spinner landing on blue is incorrect.

Work out the correct probability of the spinner landing on blue.

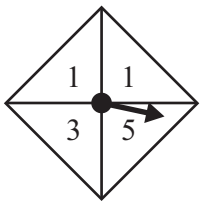
..... [2]

3. Question | 4024 Oct-Nov 2025 P1 V2 Q12

12



Spinner A



Spinner B

Luca has these two fair spinners.

(a) Luca spins both spinners and adds the two numbers to find his score.

(i) Complete the sample space diagram to show all the possible scores.

Spinner A

Spinner B	+	2	4	6	8
	1	3			
	1	3			
	3	5			
	5	7	9	11	13

[1]

(ii) Find the probability that Luca's score is greater than 10.

..... [2]

(b) Luca spins spinner A twice.
He now multiplies the two numbers to find his score.

Find the probability that his score is greater than 30.

..... [2]

4. Question | 4024 Specimen 2025 P1 Q8

8 Maya has a spinner with four sections numbered 1 to 4.

She spins the spinner 200 times.
Her results are shown in the table.

Number on spinner	1	2	3	4
Frequency	25	70	55	50

(a) (i) Write down the relative frequency of the spinner landing on 2.

..... [1]

(ii) Maya says that this relative frequency is a good estimate for the probability of the spinner landing on 2.

Explain why she is correct.

..... [1]

(b) Maya spins the spinner 500 times.

Find the number of times Maya should expect the spinner to land on 2.

..... [1]

5. Question | 4024 May-June 2026 P1 V2 Q8

8 Leo has a 5-sided spinner numbered from 1 to 5.
Leo spins the spinner 500 times.
His results are shown in the table.

number on spinner	1	2	3	4	5
frequency	105	96	95	104	100

(a) Leo says that the results show that the spinner is fair.

Explain why he is correct.

..... [1]

(b) Find the relative frequency of the spinner landing on 5.

..... [1]

(c) Mary spins this spinner 100 times.

Find the number of times Mary should expect the spinner to land on 5.

..... [1]