1. Question | 0607 Feb-March 2025 P2 V2 Q10

10 **(a)** The probability that an event happens is 0.95 .

Write down the probability that the event does not happen.

..... [1]

(b) An unbiased die is numbered 1, 2, 3, 4, 5, 6.
Jamisha rolls the die once.

Find the probability that Jamisha rolls

(i) an even number

..... [1]

(ii) a 3 or a 5.

..... [1]

2. Question | 0607 Feb-March 2025 P2 V2 Q20

20 A box contains 2 yellow pencils, 3 blue pencils and 4 green pencils.
Micah takes two pencils from the box at random without replacement.

Find the probability that the pencils are both blue.

..... [2]

3. Question | 0607 May-June 2025 P2 V2 Q15

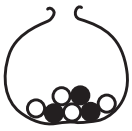
15 An unbiased die is numbered 2, 3, 4, 4, 5, 6.
Zaira rolls the die three times.

Find the probability that Zaira rolls an odd number two or more times.

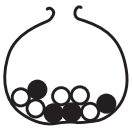
..... [4]

4. Question | 0607 May-June 2025 P2 V3 Q23

23



Bag A



Bag B

Bag A contains 4 white balls and 3 black balls.
Bag B contains 5 white balls and 4 black balls.

(a) Ranjit picks a ball at random from Bag A and replaces it.
Ranjit also picks a ball at random from Bag B and replaces it.

Find the probability that the two balls are the same colour.

..... [3]

(b) Leyla picks a ball at random from Bag A.
She places it into Bag B.
She then picks a ball at random from Bag B.

Find the probability that the ball she picks from Bag B is black.

..... [3]

5. Question | 0607 Oct-Nov 2025 P2 V1 Q6

6 The types of vehicle travelling on a road were recorded.
The table shows the results for a sample of 200 vehicles.

Type of vehicle	Car	Van	Truck	Motorcycle
Number of vehicles	84	64	40	12
Relative frequency				

(a) Complete the table. [2]

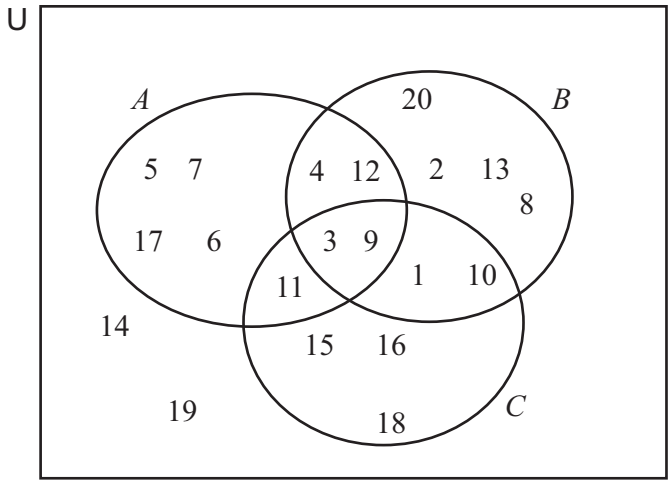
(b) One day 5000 vehicles use the road.

Work out an estimate for the number of trucks that use the road that day.

..... [1]

6. Question | 0607 Oct-Nov 2025 P2 V1 Q11

11 The numbers 1 to 20 are shown in the Venn diagram.



(a) List the elements of $A \cap B$.

..... [1]

(b) Find

(i) $\mathrm{n}(A \cup C)$

..... [1]

(ii) $\mathrm{n}[(A \cup B)' \cap C]$.

..... [1]

(c) Two of the 20 numbers are picked at random without replacement.

Find the probability that

(i) both numbers are in $(A \cup B)' \cap C$

..... [2]

(ii) one number is in A but not B and the other number is in B but not A.

..... [3]

7. Question part 1/2 | 0607 Oct-Nov 2025 P2 V3 Q20

20 Janette travels to school by train.

The probability that the train is late on any day is $\frac{1}{5}$.

(a) Work out the number of days the train is expected to be late during a school term of 50 days.

..... [1]

(b) The train is not late for n consecutive days and is late on the next day.

The probability that this happens is $\frac{64}{625}$.

Find the value of n.

$n =$ ..... [2]

(c) Work out the probability that the train is late on only one day during a week of 5 school days.

..... [2]

(d) On any day, when the train is late, the probability that Janette is late for school is $\frac{3}{4}$.

Find the probability that the train is late and Janette is **not** late for school.

..... [2]

Question 21 is printed on the next page.

8 Rohan rolls a biased die 60 times.
The table shows the results.

Score	1	2	3	4	5	6
Frequency	11	9	9	11	8	12

(a) Find

(i) the mode of the scores

..... [1]

(ii) the median score

..... [1]

(iii) the range of the scores

..... [1]

(iv) the interquartile range of the scores.

..... [2]

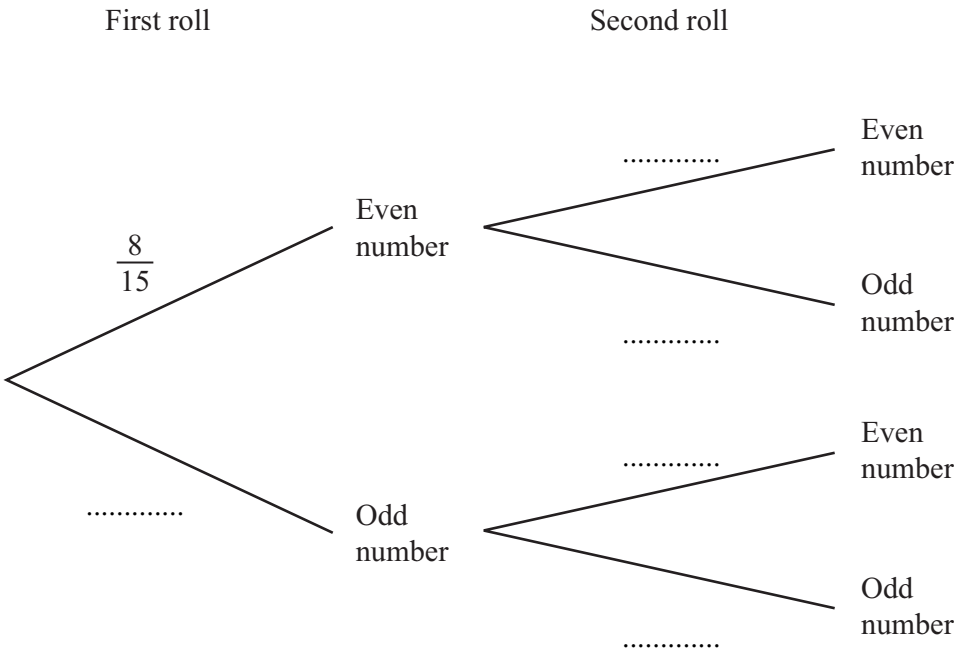
(b) Rohan uses the relative frequencies from the table to estimate the probability of the die showing an even number.

Show that the estimate of this probability is $\frac{8}{15}$.

[1]

(c) Rohan rolls the die twice.

(i) Complete the tree diagram to show the estimates of the probabilities of an even number or an odd number on each roll.



[2]

(ii) Work out an estimate of the probability that Rohan rolls one even number and one odd number.

..... [2]

9. Question | 0607 Feb-March 2026 P2 V2 Q7

7 A 4-sided spinner is spun 200 times.
The results are shown in the table.

(a) Complete the table to show the relative frequencies.

number on spinner	1	2	3	4
frequency	60	50	46	44
relative frequency				

[1]

(b) The spinner is spun 1000 times.

Find the expected number of times the spinner shows 1.

..... [1]

7 **(a)** A fair coin has sides heads (H) and tails (T).
A fair 4-sided spinner is numbered 1, 2, 3 and 4.
The coin and the spinner are both spun.

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

	1	**2**	**3**	**4**
H	H1			
T				

[1]

(ii) Find the probability that the outcome is a head and an odd number.

..... [2]

(b) Another spinner can land on black or white.
The probability that it lands on black is $\frac{1}{5}$.
The spinner is spun 3 times.

Find the probability that it lands on white 3 times.

..... [2]

10. Question part 2/2 | 0607 May-June 2026 P2 V1 Q7

(c) A bag contains 4 blue balls and 3 red balls.
Rita takes 2 balls from the bag at random without replacement.

Work out the probability that the 2 balls are the same colour.

..... [3]

11. Question | 0607 May-June 2026 P2 V2 Q2

2 The probability that any train arrives at station A on time is $\frac{5}{6}$.

(a) Write down the probability that a train arriving at station A is **not** on time.

..... [1]

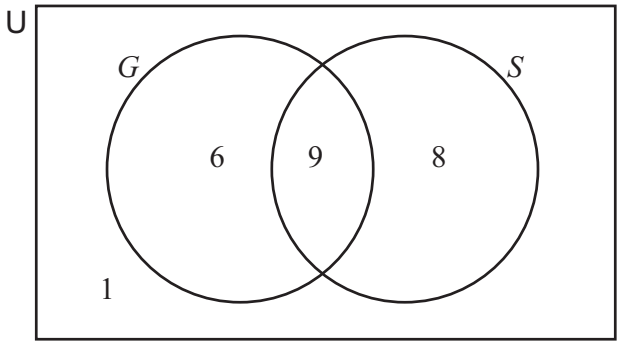
(b) One day 72 trains arrive at station A.

Work out the number of these trains that are expected to arrive on time.

..... [1]

12. Question | 0607 May-June 2026 P2 V2 Q12

12 There are 24 students in a class.
G = {students who study German}
S = {students who study Spanish}
The Venn diagram shows the number of students in each region.



(a) Write down the number of students who do **not** study German and also do **not** study Spanish.

..... [1]

(b) Find $n(G \cap S')$.

..... [1]

(c) One of the 24 students is chosen at random.

Find the probability that this student studies German or Spanish but **not** both.

..... [1]

(d) Two of the students who study German are chosen at random.

Find the probability that one student studies Spanish and one student does **not** study Spanish.

..... [3]

13. Question | 0607 May-June 2026 P2 V3 Q11

11 A bag contains 10 discs.
7 discs are red and 3 discs are blue.

A disc is picked at random from the bag and not replaced.
A second disc is then picked at random from the bag.

Find the probability that both discs are red.

..... [2]