P25- Probability of an Event Not Happening

OCR

7 Bill owns four cars. Each car is a different colour.
Each day, he drives to work in one of his cars.
The table shows the probability that Bill chooses a car of a particular colour.

Car	red	blue	yellow	white
Probability	0.4	0.17	0.05	

Work out the probability that Bill chooses the white car.

..... **[2]**

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7 Bill owns four cars. Each car is a different colour.
Each day, he drives to work in one of his cars.
The table shows the probability that Bill chooses a car of a particular colour.

0·62

Car	red	blue	yellow	white
Probability	0.4	0.17	0.05	0·38

= 1

Work out the probability that Bill chooses the white car.

0·38 ..... **[2]**

Edexcel

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7 The probability that a new fridge has a fault is 0.015

What is the probability that a new fridge does **not** have a fault?

.....

(Total for Question 7 is 1 mark)

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7 The probability that a new fridge has a fault is 0.015

What is the probability that a new fridge does **not** have a fault?

Add to 1.

$1 - 0.015 = 0.985$

0.985 ✓

(Total for Question 7 is 1 mark)

4 There are only red counters, blue counters and green counters in a bag.

number of red counters : number of blue counters : number of green counters = 1 : 3 : 7

A counter is going to be taken at random from the bag.

(a) Complete the table below to show each of the probabilities that the counter will be red or blue or green.

Colour	red	blue	green
Probability			

(2)

Jamie takes at random a counter from the bag and records the colour of the counter.
He then puts the counter back in the bag.

Jamie does this a number of times.
He records a total of 68 blue counters.

(b) Work out an estimate for the total number of times Jamie takes a counter from the bag.

.....

(2)

(Total for Question 4 is 4 marks)

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There are only red counters, blue counters and green counters in a bag.

number of red counters : number of blue counters : number of green counters = 1 : 3 : 7

A counter is going to be taken at random from the bag.

(a) Complete the table below to show each of the probabilities that the counter will be red or blue or green.

Colour	red	blue	green
Probability	$\frac{1}{11}$	$\frac{3}{11}$	$\frac{7}{11}$

(2)

Jamie takes at random a counter from the bag and records the colour of the counter.
He then puts the counter back in the bag.

Jamie does this a number of times.
He records a total of 68 blue counters.

(b) Work out an estimate for the total number of times Jamie takes a counter from the bag.

Blue = $\frac{3}{11}$

$\frac{3}{11} = 68$

$\frac{1}{11} = 22.\dot{6}$

$\frac{11}{11} = 249.\dot{3}$

249 or 250 ✓

(2)

(Total for Question 4 is 4 marks)

AQA

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25 There are 720 boys and 700 girls in a school.

The probability that a boy chosen at random studies French is $\frac{2}{3}$

The probability that a girl chosen at random studies French is $\frac{3}{5}$

25 (a) Work out the number of students in the school who study French.

[3 marks]

R4a

Answer _____

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There are 720 boys and 700 girls in a school.

1420

The probability that a boy chosen at random studies French is $\frac{2}{3}$

The probability that a girl chosen at random studies French is $\frac{3}{5}$

(a) Work out the number of students in the school who study French.

[3 marks]

R4a

720 boys $\frac{2}{3}$ of 720 = 480 boys

700 girls = $\frac{3}{5}$ of 700 = 420 girls

480 + 420

900 pupils

Answer 900 pupils

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25 (b) Work out the probability that a student chosen at random from the whole school does **not** study French.

P25

[2 marks]

Answer _____

Video created by W Neill

(b) Work out the probability that a student chosen at random from the whole school does **not** study French.

[2 marks]

P25

900 study French

Not study = 1420 - 900

Answer 520/1420 ✓

Video created by W Neill

13 A bus can be early, on time or late.

P25

The probability that the bus is early is 0.1

The probability that the bus is on time is 0.6

Work out the probability that the bus is late.

[2 marks]

Answer _____

Video created by W Neill

13 A bus can be early, on time or late.

P25

The probability that the bus is early is 0.1

The probability that the bus is on time is 0.6

always adds to 1

Work out the probability that the bus is late.

[2 marks]

$$\begin{array}{r} 0.1 \\ +0.6 \\ \hline 0.7 \end{array}$$

late whats left

$1 - 0.7$

Answer 0.3 ✓

20 The probability that A is the outcome of an experiment is 0.2

Circle the probability that A is **not** the outcome.

P25

[1 mark]

0 0.2 0.5 0.8

20 The probability that A is the outcome of an experiment is 0.2 $+0.8 = 1$

Circle the probability that A is **not** the outcome.

P25

[1 mark]

0 0.2 0.5 0.8

Video created by W Neill

9 There are 720 boys and 700 girls in a school.

The probability that a boy chosen at random studies French is $\frac{2}{3}$

The probability that a girl chosen at random studies French is $\frac{3}{5}$

9 (a) Work out the number of students in the school who study French.

[3 marks]

R4a

Answer _____

Video created by W Neill

9 There are 720 boys and 700 girls in a school.

1420

The probability that a boy chosen at random studies French is $\frac{2}{3}$

The probability that a girl chosen at random studies French is $\frac{3}{5}$

9 (a) Work out the number of students in the school who study French.

[3 marks]

R4a

720 boys $\frac{2}{3}$ of 720 = 480 boys

700 girls = $\frac{3}{5}$ of 700 = 420 girls

480 + 420

900 pupils

Answer 900 pupils

Video created by W Neill

9 b) Work out the probability that a student chosen at random from the whole school does **not** study French.

P25

[2 marks]

Answer _____

Video created by W Neill

9 **(b)** Work out the probability that a student chosen at random from the whole school does **not** study French.

[2 marks]

P25

900 study French

Not study = 1420 - 900

Answer 520/1420 ✓