

Q1. John goes to work by car or by train.

- (a) The probability that John goes by car is 0.4

Work out the probability he goes by train.

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Answer

(1)

- (b) John works for 200 days each year.

How many days would you expect him to go to work by car?

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Answer

(2)

- (c) Ben also goes to work by car or by train.
 Out of 200 days, he went by car on 150 days.

Work out the relative frequency that Ben goes to work by car.

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Answer

(1)

(Total 4 marks)

- Q2.(a)** A bag contains 20 counters.
 8 of the counters are yellow.

A counter is picked at random.

What is the probability that it is yellow?

Give your answer as a fraction in its simplest form.

Answer

(2)

- (b) A different bag contains only black and white counters.
The probability that a counter is black is 0.14

A counter is picked at random.

What is the probability that it is white?

Answer

(2)

(Total 4 marks)

Q3.

Sweets come in four flavours.

Flavour	Lime	Orange	Melon	Cherry
Probability	0.2	0.15	0.3	

- (a) What is the probability that a sweet is **cherry** flavour?

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.....

Answer

(2)

- (b) What is the probability that a sweet is **lime** or **melon** flavour?

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Answer

(1)

(c) There are 200 sweets altogether.

How many are **orange** flavour?

.....

Answer

(2)
 (Total 5 marks)

Q4.

Sweets come in four flavours.

Flavour	Lime	Orange	Melon	Cherry
Probability	0.2	0.15	0.3	

(a) What is the probability that a sweet is **cherry** flavour?

.....

Answer

(2)

(b) There are 200 sweets altogether.

How many are **orange** flavour?

.....

Answer

(2)
 (Total 4 marks)

Q5. A play area has thousands of coloured balls.
They are white, pink or yellow.

Sam picks 10 balls at random.
The table shows some of her results.

	white	pink	yellow
Frequency	4		
Relative frequency		0.1	

(a) Complete the table.

(3)

(b) Sam uses her results to estimate the proportion of white balls in the play area.

How could she make her estimate more reliable?

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(1)

(Total 4 marks)

Q6. 150 boys and 160 girls sit an examination.

The table shows some of the probabilities that they came with or without a calculator.

	With calculator	Without calculator
Boy	0.92	0.08
Girl	0.95	

- (a) What is the probability that a girl came **without** a calculator?
Write your answer in the table.

(1)

- (b) How many of the 150 boys came **with** a calculator?

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Answer

(2)

(Total 3 marks)

Q7.

An ordinary six-sided dice is rolled 300 times.
It lands on five 120 times.



Do you think the dice is fair?
Give a reason for your answer.

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(Total 2 marks)

Q8.

A bag contains only red balls and blue balls.
The probability of choosing a **red** ball is 0.4

(a) What is the probability of choosing a **blue** ball?

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Answer

(1)

(b) What is the least number of balls that could be in the bag?

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Answer

(1)

(c) The number of red balls in the bag is doubled.
The number of blue balls in the bag is also doubled.

What is the probability of choosing a **red** ball now?

Answer

(1)

(Total 3 marks)

Q9.

The four possible outcomes of a trial are A, B, C and D.

	A	B	C	D
Probability	0.3	0.25	0.1	

(a) What is the probability that the outcome of the trial is D?

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.....

Answer

(2)

(b) What is the probability that the outcome of the trial is A **or** C?

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Answer

(1)

(Total 3 marks)

Q10.A bag only contains red and blue counters.
It contains 24 red counters.

A counter is chosen at random from the bag.

The probability of choosing a blue counter is $\frac{1}{4}$.

How many counters are in the bag?

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.....

Answer

(Total 3 marks)

Q11.People in a town voted in an election.

The probability a vote was given to a particular party is shown.
One value is missing.

Party	Probability
Conservative	0.41
Labour	0.24
Liberal Democrat	0.22

UKIP	
Other	0.04

(a) Complete the table.

.....

(2)

(b) There are 15 000 people in the town.
 8000 voted.

How many people in the town did **not** vote Conservative?

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Answer

(3)

(Total 5 marks)

Q12.In a game, players try to win a coloured counter.
 There are six possible colours.
 The table shows the probability of winning each colour.

Colour of Counter	Probability
Yellow	0.04
Green	0.07
Brown	0.09
Blue	0.10
Pink	0.13
Black	0.14

(a) Which colour is twice as likely to be won as green?

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Answer

(1)

(b) Work out the probability of winning yellow or brown.

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Answer

(2)

(c) Tariq plays the game 160 times.

Estimate the number of times that he does **not** win.

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Answer

(4)

(Total 7 marks)