

Systematic Listing

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **22**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** A shop sells a phone in three colours: black (B), silver (S) or gold (G).
Each colour comes with 64 GB or 128 GB of storage.
The shop does **not** sell a gold phone with 64 GB of storage.

Write down all the different phones the shop sells.

(2)

(Total for Question 1 is 2 marks)

- 2** Kwame plays three games of chess.
Each game ends in a win (W) or a loss (L). There are no draws.
For example, WLL means he wins the first game and loses the second and third games.
List all the possible results of the three games.

(2)

(Total for Question 2 is 2 marks)

- 3** Nia has to visit three shops: a bakery (B), a chemist (C) and a newsagent (N). She will visit each shop once.

Use the table to list all the different orders in which Nia could visit the three shops.

1st shop	2nd shop	3rd shop

(2)

(Total for Question 3 is 2 marks)

- 4** Tariq has three cards.

0 5 9

He puts all three cards down in a row to make a 3-digit number.

A 3-digit number cannot start with 0

How many different 3-digit numbers can Tariq make?

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(2)

(Total for Question 4 is 2 marks)

- 5** Zoe rolls a red dice and a blue dice.
Both dice are ordinary six-sided dice.
She adds the two scores to get a total.

List all the ways Zoe could get a total of 8

(2)

(Total for Question 5 is 2 marks)

- 6** A target has three rings.
The rings score 1 point, 3 points and 5 points.
Hana throws 2 darts. Both darts hit the target.
Both darts can land in the same ring.

Write down all the possible total scores Hana can get.

(2)

(Total for Question 6 is 2 marks)

- 7 Jo has four coins: 10p, 20p, 50p and £1
She picks two of the coins.

Write down all the possible total amounts she can pick.

(2)

(Total for Question 7 is 2 marks)

- 8 Tom has three cards.

1	4	6
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He puts two of the cards down to make a 2-digit number.

- (a) Write down all the 2-digit numbers Tom can make.

(2)

- (b) How many of these numbers are multiples of 4?

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(1)

(Total for Question 8 is 3 marks)

- 9** Maria has 4 T-shirts and 3 pairs of shorts.
An outfit is one T-shirt and one pair of shorts.
Show that Maria can make 12 different outfits.

(2)

(Total for Question 9 is 2 marks)

- 10** Pens cost 30p each.
Pencils cost 20p each.
Kim buys at least one pen and at least one pencil.
She spends exactly £1.50
Find all the possible numbers of pens and pencils that Kim could buy.

(3)

(Total for Question 10 is 3 marks)
