

Name:

Date:

Systematic Listing

GCSE

Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

<hr/> 43

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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

- 1 A bag contains a green bead (G), a white bead (W) and a purple bead (P).
A coin can land on tails (T) or heads (H).

A bead is chosen at random from the bag and the coin is flipped.
One of the possible outcomes is a green bead and a tail (GT).

List all the other possible outcomes.

GT, **GW**

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(Total for question 1 is 2 marks)

- 2 Angelo is going to have a meal.
He can choose one starter and one main from the menu.

<u>Menu</u>	
Starter	Main
Soup	Pasta
Dough Balls	Pizza
Garlic Bread	Salad

Write down all the possible combinations Andrew can choose.

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(Total for question 2 is 2 marks)

3 Michael goes to a coffee shop.
He chooses one drink and one snack.

Drink	Snack
Tea	Muffin
Coffee	Brownie
Juice	Crisps
	Pastry

Write down all the possible combinations.

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(Total for question 3 is 2 marks)

4 George is going to roll a 6 sided dice and flip a coin.
The dice can land on 1, 2, 3, 4, 5 or 6.
The coin can land on heads or tails.

List all the possible outcomes.

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(Total for question 4 is 2 marks)

5 Ellie is going to flip a coin three times.

List all the possible outcomes.

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(Total for question 5 is 2 marks)

- 6 Charlotte has to choose which subjects she wants to study. She can choose one humanity and one language from the options.

Options	
Humanities	Languages
History	French
Geography	German
	Spanish

Write down all the possible combinations Charlotte can choose.

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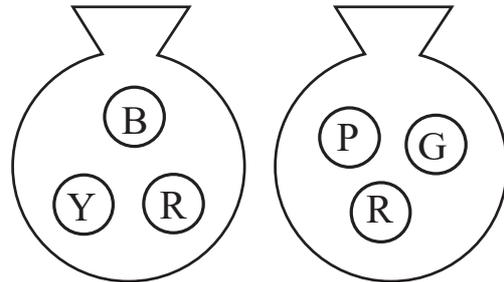
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(Total for question 6 is 2 marks)

- 7 There are two bags. Each bag has three counters inside.

In bag 1, there is one red counter, one green counter and one pink counter.

In bag 2, there is one blue counter, one yellow counter and one red counter.



Rob takes a counter at random from bag 1 and a counter at random from bag 2.

- (a) Write a list of all the possible combinations of the two counters that Rob can take.

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(2)

- (b) Find the probability that Rob takes two counters that are the same colour.

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(1)

(Total for question 7 is 3 marks)

8 Archie is going to roll two 6-sided dice. Each dice can land on 1, 2, 3, 4, 5 or 6.

(a) List all the possible outcomes.

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(3)

Archie adds up the two numbers to get a total score.

(b) Work out the probability of Archie scoring more than 7.

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(1)

(Total for question 8 is 4 marks)

9 Mohammad flips a fair coin and rolls a fair dice.

List all the possible combinations

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(2)

(b) Find the probability that Mohammad gets a tail and a prime number.

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(1)

(Total for question 9 is 3 marks)

10 Orla has four types of vegetable.

- Peas
- Carrots
- Turnip
- Spinach

Orla is going to choose 2 different types of vegetable.

Write down all the possible combinations of vegetable she can choose.

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(Total for question 10 is 2 marks)

11 Two coins are flipped.

List all the possible outcomes.
Use T for tails and H for heads.

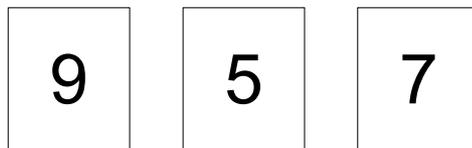
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(Total for question 11 is 2 marks)

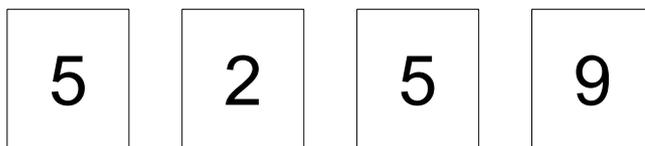
12 Here are three number cards



Write down all the possible three-digit numbers that can be made using the cards.

(Total for question 12 is 2 marks)

13 Here are four number cards

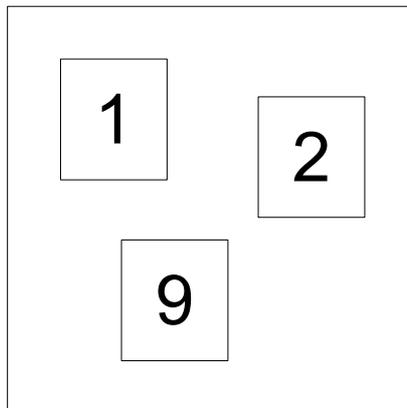


Write down all the different possible four-digit numbers that can be made using the cards.

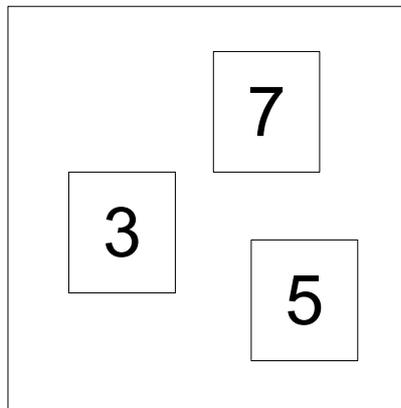
(Total for question 13 is 2 marks)

- 14 There are three cards in box A and three cards in box B.
There is a number on each card.

Box A



Box B



Charles takes a card from box A and a card from box B.
He multiplies the numbers on the two cards to get a total score.

Work out the probability that the total score is an odd number.

(Total for question 14 is 3 marks)

15 Four teams, Ajax, Barcelona, Chelsea and Dortmund, are each going to play a match against each other in a competition. Each team will play every other team once.

(a) Write down all the matches that will take place.

(2)

At the end of the competition, one team will be in first place, one will be in second place, one will be in third place and one will be in fourth place.

(b) Use the table to list all the possible outcomes of the competition.

First Place	Second Place	Third Place	Fourth Place

(3)

(Total for question 15 is 5 marks)

16 Charlie is having a meal with her friends.
He is going to choose one starter, one main and one dessert. This is the menu.

Starter	Main	Dessert
Soup £2.50	Chicken £6.25	Trifle £3.50
Prawns £4.25	Beef £8.00	Brownie £4.00
Melon £3.50	Lamb £7.50	Shake £7.50

Charlie has £15
List all the possible combinations that Megan can afford.

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(Total for question 16 is 5 marks)

