



Foundation / Higher Tier

Listing possible outcomes

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The marks for **each** question are shown in brackets- *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

1. A restaurant offers the following choices:

Starters:

- Soup
- Garlic Bread
- Salad

Main Courses:

- Pizza
- Pasta
- Burger

List all the possible combinations of one starter and one main course.

(Total for Question 1 is 2 marks)

2. A fair coin is flipped and a fair six-sided dice is rolled.

List all the possible outcomes.

(Total for Question 2 is 2 marks)

3. A fair coin is flipped twice.

List all the possible outcomes.

(Total for Question 3 is 2 marks)

4. A spinner has four equal sections labelled 1, 2, 3 and 4.

The spinner is spun twice.

(a) List all the possible outcomes.

(2)

(b) What is the probability that the total is 5?

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(2)

(c) What is the probability that the same number is obtained both times?

.....
(2)

(Total for Question 4 is 6 marks)

5. Three number cards are shown:

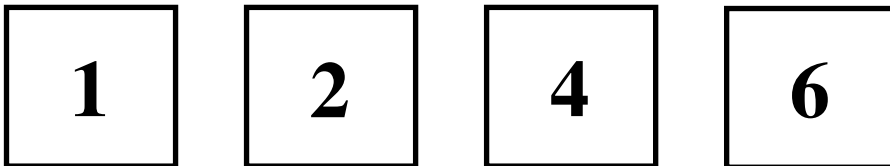


A two-digit number is made using two different cards.

Write down all the possible two-digit numbers.

(Total for Question 5 is 2 marks)

6. Four number cards are shown:



A three-digit number is made using three different cards.

Write down all the possible three-digit numbers.

(Total for Question 6 is 2 marks)

7. Four number cards are shown:

1

2

3

4

Two cards are picked at random without replacement and the numbers are added together.

What is the probability that the total is odd?

.....
(Total for Question 3 is 4 marks)

8. Four number cards are shown:

2

3

5

8

Two cards are picked at random without replacement and the numbers are added together.

What is the probability that the total is even?

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(Total for Question 3 is 4 marks)