Name: _____

ASM Tuition Academy

SYSTEMATIC LISTING

Instructions:

- Use **black** ink or ball-point pen.
- Answer all the questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out.**

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 time.
- Try to answer every question.
- Check your answers if you have time at the end.

Q1. Anna is going to have a meal.
She can choose one starter and one main from the menu.

Menu

Starter	Main
Soup (s)	Pasta
Hot dog (HD)	Pizza
Bread (B)	Salad

Write down all the possible combinations Anna can choose.

(Total for question 1 is 2 marks)

Q2. Usama 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 down all the possible outcomes.

......
......
(Total for question 2 is 2 marks)

Q3. Grey is going to flip a coin two times.
List all the possible outcomes.

......
(Total for question 3 is 2 marks)

Q4. Carry must choose which subjects he wants to study.
He can choose one humanity and one language from the options.

Options

Sciences	Languages
Biology (B)	English (E)
Chemistry (C)	Spanish (S)
	French (F)

Write down all the possible combinations Carry can choose.

(Total for question 4 is 2 marks)

Q5. Aima is going to roll two 6-sided dice.
Each dice can land on 1, 2, 3, 4, 5 or 6.
(a) List down all the possible outcomes.

…………………..
(3)

Aima adds up the two numbers to get a total score.
(b) Work out the probability of Aima scoring more than 7.

……………………
(1)
(Total for question 5 is 4 marks)

Q6. Following are three number cards

3   2   8

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

(Total for question 6 is 2 marks)

Q7. Following are four number cards

A   B   C   D

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

(Total for question 7 is 3 marks)

Q8. Following are three number cards

6   5   7

Write down all the possible three-digit numbers that can be made using the cards.
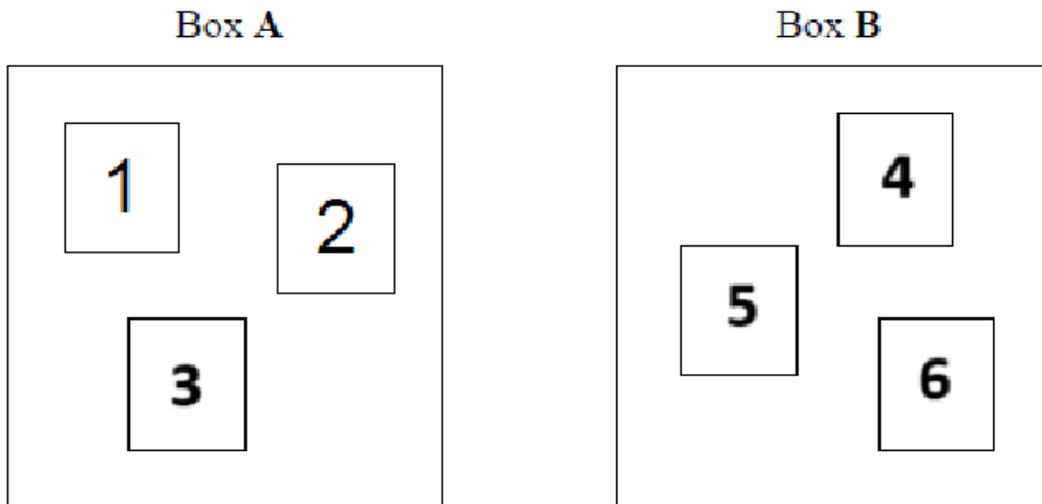
(Total for question 8 is 2 marks)

Q9. Following are four number cards

5   2   5   6

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

(Total for question 9 is 3 marks)

Q10. There are three cards in box A and three cards in box B.
There is a number on each card.

Box A

Box B

1

2

3

4

5

6

Charlie 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 10 is 3 marks)

Q11. Four teams, A, B, C and D 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 position, one will be in second position, one will be in third position, and one will be in fourth position.

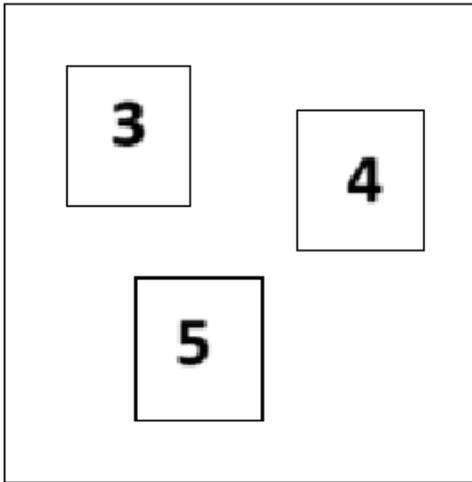**(b) Use the table to list all the possible outcomes of the competition.**

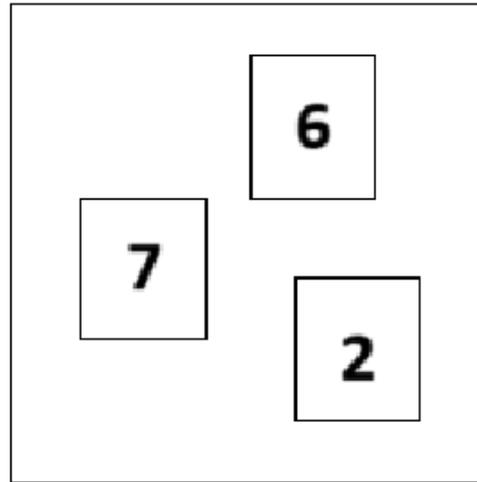| 1st Position	2nd Position	3rd Position	4th Position

(3)

(Total for question 11 is 5 marks)

Q12. There are three cards in box A and three cards in box B.
There is a number on each card.

Box A

Box B

Borris takes a card from box A and a card from box B.
(a) Write down all the possible combinations of cards Borris can take.

....
....
...... (2)

Borris adds the numbers on the two cards to get a total score.
(b) Work out the probability that the total score is greater than 10.

...... (1)
(Total for question 12 is 3 marks)