



Systematic Listing Exam Practice

Q1. Here is a menu at a café:

<u>Starters:</u>	<u>Mains:</u>
Melon	Lasagne
Soup	Hamburger
Olives	Omelette

Matt is going to choose a starter followed by a main course. Write down all the possible combinations he could choose.

Melon, Lasagne
Melon, Hamburger
Melon, Omelette
Soup, Lasagne
Soup, Hamburger
Soup, Omelette
Olives, Lasagne
Olives, Hamburger
Olives, Omelette.

Answer: _____
(2 marks)

Q2. Jack throws a spinner which is numbered 2, 4, 6 and 8 and flips a normal coin which has one side 'tails' and one side 'heads'. Write down all the possible combinations he could obtain.

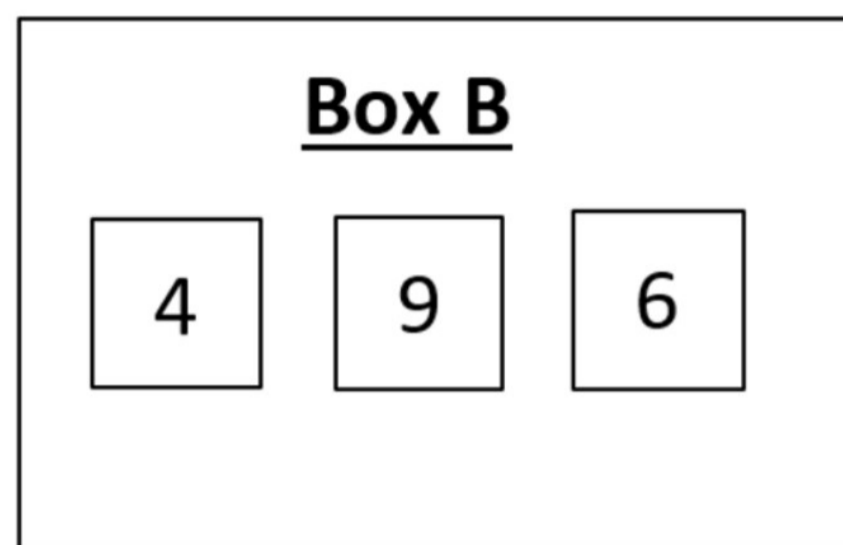
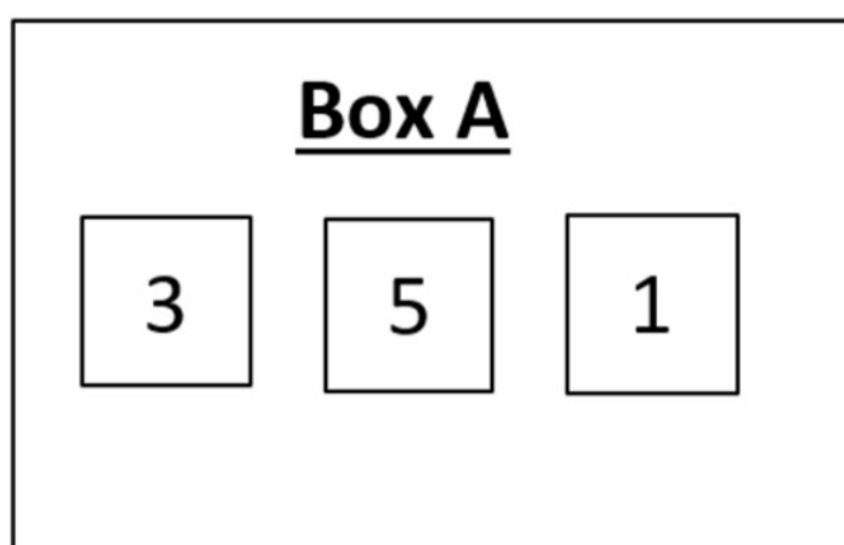
let H = heads, T = tails

2, H 2, T
4, H 4, T
6, H 6, T
8, H 8, T

Answer: _____
(2 marks)



Q3. Here are 2 boxes containing number cards:



Ben selects a number at random from Set A and Set B and adds them together. He wins a prize if the result is more than 10.

a) Write down all the pairs of numbers for which Ben wins a prize.

<u>A</u>	<u>B</u>
3	9
5	9
5	6

Answer: _____
(2 marks)

b) Find the probability that Ben wins a prize.

There are $3 \times 3 = 9$ combinations.
only 3 win a prize.
 $\Rightarrow \frac{3}{9}$

Answer: $\frac{1}{3}$
(2 marks)



Q4. a) Sam flips 3 coins. Using 'T' for Tails and 'H' for Heads, list all the different outcomes that could have occurred.

H, H, H H, T, H
H, H, T H, T, T

T, H, H T, T, H
T, H, T T, T, T

Answer: _____
(2 marks)

b) Find the probability that Sam obtains 2 Heads.

2 heads occurs in : H, T, H
H, H, T and
T, H, H conditions
So in 3 out of 8 cases.

Answer: $\frac{3}{8}$
(2 marks)



Q5. On a holiday resort, the following trips are available:

<u>Morning:</u>	<u>Afternoon:</u>
Park	Theatre
Beach	Restaurant
Gallery	Park
Cafe	Museum

Yan wants to do a trip in the morning and a trip in the afternoon. She wants to do two different trips, and does not want to eat in the morning. Write down all the possible combination of trips she could do.

Park, Theatre
Park, Restaurant
Park, Museum

Beach, Theatre
Beach, Restaurant
Beach, Park
Beach, Museum

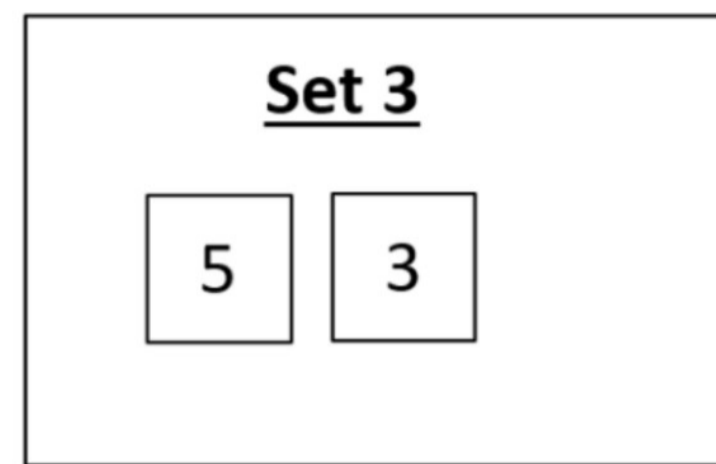
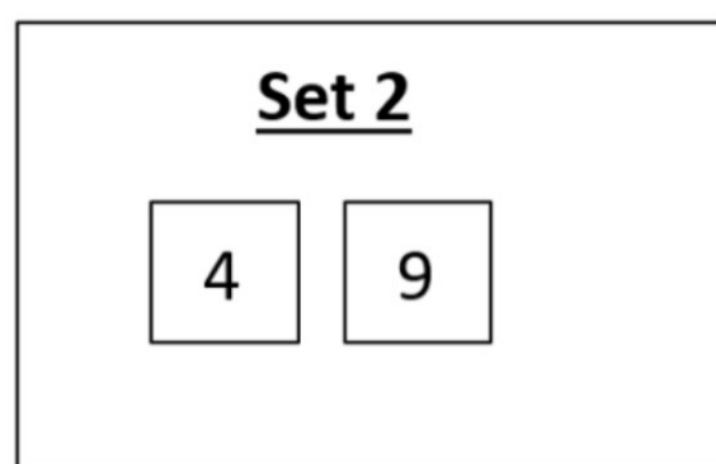
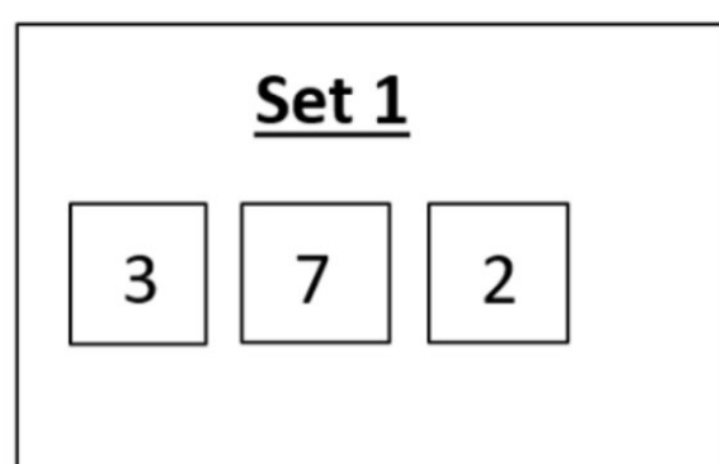
Gallery, Theatre
Gallery, Restaurant
Gallery, Park
Gallery, Museum

Answer: _____

(3 marks)



Q6.



Martin chooses a number from each set and finds the product of the three numbers. List all the combinations where the result is over 60.

<u>Set 1</u>	<u>Set 2</u>	<u>Set 3</u>
3	9	3
3	9	5
7	4	5
7	4	3
2	9	5

Answer: _____

(4 marks)



Q7. A shop sells small, large and medium handbags. Every bag comes in two colours, black and tan. Write down all the different possible bags that are available.

let $S = \text{small}$, $L = \text{large}$, $M = \text{medium}$

let $B = \text{black}$, $T = \text{tan}$.

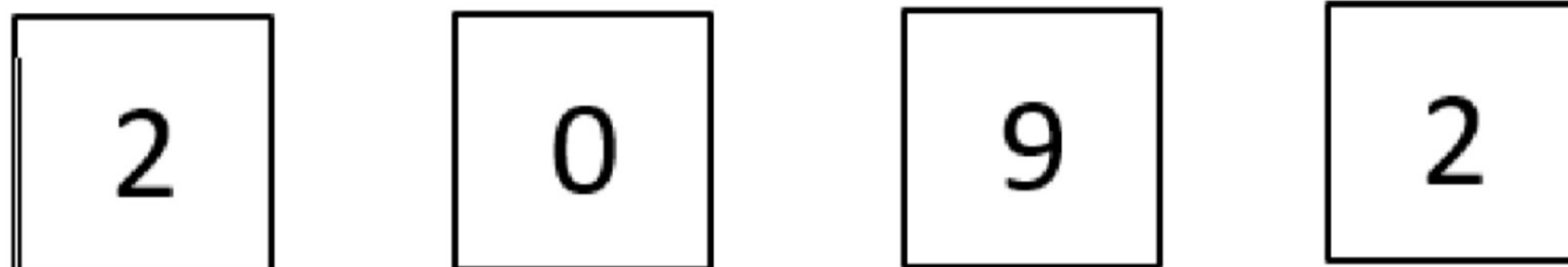
S, B L, B M, B
 S, T L, T M, T

Answer: _____

(2 marks)



Q8. Write down all the 3 digit different numbers that could be made from the following number cards.



209 902
202 920
292 922

Answer: _____
(3 marks)



Q9. A company produces badges and stickers, and each of these comes in either red or blue. Dan wishes to order two items from the company.

Write down all the possible different combinations he could choose.

Red Badge, Blue Badge

Red Badge, Blue sticker

Blue Badge, Red sticker

Blue Badge, Blue sticker

Answer: _____

(3 marks)