## Workout

Question 1: Emily flips a coin twice.
One of the possible outcomes is a tail and a tail (TT)
List all the possible outcomes.

Question 2: Benjamin rolls an ordinary six-sided dice once and flips a coin.
List all the possible outcomes.


Question 3: A rugby team plays two matches.
They can win (W), draw (D) or lose (L) each match.
List all the possible outcomes.

Question 4: There are five students in a group: Alison, Beth, Conor, David and Eddie. Miss Jenkins chooses two students at random from the group to give a presentation.
List all the possible outcomes.

Question 5: Here are four cards.
Each card has a number on it.

(a) Write down all the 2-digit numbers that can be made using the cards
(b) Write down all the 3-digit numbers that can be made using the cards

Question 6: Marco visits a restaurant with his friends.
Shown is the menu.
Marco chooses one starter, one main and one dessert.
List all possible outcomes.

| Starter | Main | Dessert |
| :---: | :---: | :--- |
| Soup | Curry | Ice Cream |
| Fish | Pizza | Danish |
|  | Burger |  |

## Listing Outcomes

Question 1: Andrew has attempted his maths homework.
Can you spot any mistakes?
Q1 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.

$$
\begin{aligned}
& P C, P T, P S \quad C P, C T, C S \\
& \hline T P, T C, T S \quad S P, S C, S T
\end{aligned}
$$

Question 2: Here are four cards.
Each card has a number on it.


Write down all the 3-digit even numbers that can be made using the cards

Question 3: In a restaurant, there are 5 possible pizza toppings:
Chicken, Pineapple, Olives, Mushrooms and Beef.
Freddie picks two different toppings on his pizza
(a) List all possible outcomes

Freddie picks the toppings at random
(b) Write down the probability that the pizza contains meat

Question 4: There are two bags.
Bag 1 contains a red counter and a pink counter.
Bag 2 contains a blue counter, a yellow counter and a white counter.
Sam picks a counter at random from bag 1 and notes its colour He then places this counter into bag 2.
Sam then picks a counter at random from bag 2.


Write down the probability that Sam picks two counters that are the same colour

## Listing Outcomes

Question 5: Heather has made up a game for a school fête to raise money for charity.
There are two boxes of counters.
Each counter has a number on it.
The person playing the game will select one counter
Box 1
Box 2
 at random from box 1 .
They will then select one counter at random from box 2 .
(a) Write down all the possible combinations of counters picked.

The person playing the game wins when the numbers multiply to give an odd number.

During the fête the game is played 300 times.
The game costs 80 p to play.
Each prize costs $£ 2$
(b) Work out how much money Heather should raise for charity.

Question 6: Ali is having a meal with his friends. He will either have:

- one starter and one main
or
- one main and one dessert

Shown is the menu

| Starter | Main |  | Dessert |  |  |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Soup | $£ 3.20$ | Chicken | $£ 6.25$ | Trifle | $£ 2.50$ |
| Prawns | $£ 3.55$ | Beef | $£ 8.00$ | Brownie | $£ 2.15$ |
| Melon | $£ 2.45$ | Pork | $£ 6.75$ | Eton Mess | $£ 3.50$ |
| Duck | $£ 3.95$ |  |  | Ice Cream | $£ 1.95$ |
|  |  |  |  |  |  |

Ali has $£ 10$.
List all the possible combinations that Ali cannot afford.



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