

## Listing Outcomes with Two Events

### Starter

- (Review of last lesson)** In a box of chalk, 10 pieces are white, 5 are yellow and 3 are red. Emma chooses one piece at random. Find the probability that this piece is:  
(a) yellow (b) not yellow.
- List the possible outcomes when two fair coins are tossed. Write down the probability of getting each outcome.

### Notes

When listing outcomes it is important to be *systematic*, especially when there are three or more events.

With only two events a table can be used

**E.g. 1** List the possible outcomes when an unbiased coin is tossed and a 6-sided fair dice is rolled.

**Working:**

		Dice					
		1	2	3	4	5	6
Coin	Head	H, 1	H, 2	H, 3	H, 4	H, 5	H, 6
	Tail	T, 1	T, 2	T, 3	T, 4	T, 5	T, 6

**E.g. 2** Write down the possible outcomes when **three** coins are tossed. What is the probability of each one occurring?

**Hint:** use your answer to question 2 from the starter.

**E.g. 3\*** Caitlin and Dave each buy either an Aero, Bounty, Crunchie or Dime bar. List the possible pairs of bars which Caitlin and Dave can choose. Write down the probability of each outcomes.

**Working:** Let A = Aero, B = Bounty, C = Crunchie and D = Dime  
If Caitlin chooses A, Dave could choose A, B, C or D: AA, AB, AC, AD  
...

**Video:** [Listing outcomes](#)

[Solutions to Starter and E.g.s](#)

### Exercise

p172 Ex 10.2 Qu 2-5, 7-10

### Summary

When listing outcomes it is important to be *systematic*, especially when there are three or more events. With only two events a table can be used.

[Textbook answers \(only available during a lockdown\)](#)