

# Probability & Statistics

Probability: the chances (odds) of an event occurring  $\frac{\text{successful outcomes}}{\text{total possible outcomes}}$

Statistics: the study of numbers, patterns and correlations

What are the probabilities of the scenarios below?

a) Flipping a coin that lands on heads?

b) ... lands on tails?

c) lands on heads or tails?

d) flipping a coin twice and it lands on heads both times?

e) flipping a coin twice and it is the same both times

What are the probabilities of rolling the scenarios outlined below with a standard 6-sided die?

- a) ... a 4?
- b) rolling a 1?
- c) rolling an odd number?
- d) rolling a 4 or a 1?
- e) rolling a number that is not a 5?
- f) rolling two sixes in a row?
- g) rolling doubles of any kind?
- h) what is the probability of rolling a ~~Yahtzee~~ Yahtzee?