PROBABILITY

Exercises

1. Write down whether each of the following outcomes is 'certain', 'impossible' or 'possible':
   a) You'll throw a 9 with a regular die.
   b) You'll have a birthday on the same date each year.
   c) Your friend will go to Mars next summer.
   d) You'll receive an email from a friend tonight.

2. Copy the likelihood scale below.

Impossible	Unlikely	Even chance	Likely	Certain

   Mark each of these outcomes on the scale.
   a) It'll rain in Manchester next year.
   b) The next baby born will be female.
   c) You'll live until you're 300 years old.
   d) The next person you'll see is famous.

3. A, B, C and D are four outcomes that have been marked on this probability scale:

   A B   C   D

   Write down possible outcomes that A, B, C and D could be.

4. List all possible outcomes for each of the following events:
   a) Spinning this spinner.   b) Picking a counter from this box without looking.

   Red Yellow
   Green   Pink
   Blue   Black
      Red

5. A bag contains three red, four blue and two green counters.
   A counter is taken from the bag at random.
   What is the probability that the chosen counter is...
   a) red?   b) yellow?   c) blue?

6. A multipack of crisps contains two cheese and onion, four ready salted, four salt and vinegar and one smoky bacon.
   Thomas takes a bag of crisps without looking at the flavours.
   What is the probability that Thomas picks...
   a) cheese and onion?   c) smoky bacon?
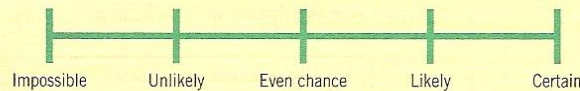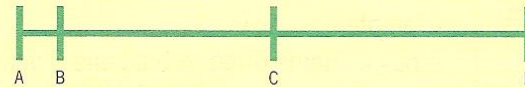   b) ready salted?   d) prawn cocktail?

Quick Test

1. Explain what probability is.
2. A bag contains three red beads and two green beads.
   A bead is taken out of the bag at random.
   What is the probability that it's...
   a) red?
      A $\frac{2}{5}$ B 1   C $\frac{3}{5}$ D 0
   b) green?
      A $\frac{2}{5}$ B 1   C $\frac{3}{5}$ D 0
   c) red or green?
      A $\frac{2}{5}$ B 1   C $\frac{3}{5}$ D 0
3. The number of outcomes when a fair die is thrown is 6. True or false?
4. The probability of getting a head on a fair coin is $\frac{1}{2}$. True or false?