

PROBABILITY

Exercise 1

Choose one word for each event:

IMPOSSIBLE

UNLIKELY

LIKELY

CERTAIN

- Tomorrow will be Christmas day
- I will have pizza for dinner tonight
- It will be very hot tomorrow
- I will be in school tomorrow
- I will be in Disneyworld tonight
- It will get dark tonight
- I will be in bed by midnight tonight
- Tomorrow will be my birthday
- The grass will be purple tomorrow

0 stands for IMPOSSIBLE and 1 for a CERTAIN event.

What is the probability that:

- The grass will be blue tomorrow
- You will breathe today
- Tossing a coin will get you a tail
- Rolling a die will get you an even number
- Rolling a die will get you an odd number



- 1 If a letter is chosen at random from the word SUCCESS, what is the probability that it will be:
 - a) the letter S?
 - b) the letter C?
- 2 If a letter is chosen at random from the word PEPPER, what is the probability that it will be:
 - a) the letter P?
 - b) the letter E?
- 3 If a letter is chosen at random from the word GEORGE, what is the probability that it will be:
 - a) the letter E?
 - b) the letter G?
 - c) a vowel(A,E,I,O,U)
 - d) a consonant (not a vowel)?

4 If a letter is chosen at random from the word PENELOPE, what is the probability that it will be:

a) the letter E? **b)** the letter P?

c) a vowel? **d)** a consonant?



5 When a die is rolled what is the probability that the outcome is :

a) the number 5 ? **b)** an even number ? **c)** an odd number ?

6 A game consists of spinning an arrow which is equally likely to land on 1,2,3,4,5. What is the probability it will point to :

a) an even number? **b)** an odd number? **c)** the number 3 ?

- 7** There are 30 pupils in a class. 15 have blue eyes, 10 have brown eyes and 5 have green. What is the probability that a pupil will have:
- a)** blue eyes **b)** green eyes? **c)** brown eyes?
- 8** A box contains 10 white beads and 20 black beads. If a bead is drawn what is the probability that it is :
- a)** white **b)** black?
- 9** If a letter is chosen at random from the word WOODWORK, what is the probability that it will be:
- a)** the letter O? **b)** the letter W? **c)** a consonant?

- 10** If a letter is chosen at random from the word NEEDLEWORK, what is the probability that it will be:
- a)** the letter E? **b)** a vowel? **c)** a consonant?
- 11** When a card is drawn at random from a pack of 52 playing cards, what is the probability that it is:
- a)** an ace? **b)** a heart? **c)** the ace of spades? **d)** a king, queen or jack?



- 12** There are 50 cars of the same make in a showroom. 18 are blue, 15 white, 10 green, 7 red. If it is equally likely any one of them will be sold, what is the probability that it will be:
- a)** white?
 - b)** green?
 - c)** red or blue?
 - d)** neither red nor blue?

Exercise 4



- 1) Five cards-10, jack, queen, king, ace- are shuffled face down. One of the cards is picked at random.
 - a) What is the probability that the ace is picked?
 - b) If the jack is drawn, and kept out, what is the probability that the next card chosen will be an ace?

- 2) A bag contains 5 white marbles, 3 black and 2 red.
 - a) What is the probability that if one marble is chosen at random it will be white?
 - b) If a white marble is chosen, and not replaced, what is the probability that a black marble will be chosen next?

- 3) A bag contains 6 red counters and 10 green counters.
 - a) If a counter is removed what is the probability that it is red?
 - b) If the counter was red and it was not replaced what is the probability that the next counter to be picked out would also be red?



- 4) A bag contains 1 red counter and 5 green counters.
- a) If a counter is removed what is the probability that it is red?
 - b) If the counter was red and it was not replaced what is the probability that the next counter to be picked out would also be red?
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- 5) A bag contains 5 red counters and 12 green counters.
- a) If a counter is removed what is the probability that it is red?
 - b) If the counter was red and it was not replaced what is the probability that the next counter to be picked out would also be red?



- 6)** A bag contains 8 red counters and 5 green counters.
- a)** If a counter is removed what is the probability that it is red?
 - b)** If the counter was red and it was not replaced what is the probability that the next counter to be picked out would also be red?