Probability

Exercise 1

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?   **d)** a consonant?

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) 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?

6) 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?

7) On a supermarket shelf there are 16 bags of sugar, 12 of which contain white sugar and 4 of which contain brown sugar. If a bag is taken at random, what is the probability that it will contain:

a) white sugar?   b) brown sugar?

8) In class 3A there are 12 boys and 8 girls. If the pupils leave their classroom and walk to the assembly hall in any random order, what is the probability that the first pupil to enter the hall will be:

a) a boy?   b) a girl?

9) A farmer has 25 white sheep and 5 black sheep. If they are rounded up for shearing in any random order, what is the probability that the first one to be sheared will be:

a) white?   b) black?

10) A box of sweets contains 15 chocolates, 9 toffees and 6 nougats. If a sweet is taken from the box at random, what is the probability that it will be:

a) a chocolate?   b) a toffee?   c) a nougat?

11) In class 2B there are 18 girls with dark hair, 10 girls with fair hair and 2 girls with red hair. If their teacher asks one girl at random to give out some books, what is the probability that she will have:

a) dark hair?   b) fair hair?   c) red hair?

12) A £1 cash bag contains six 10p coins, four 5p coins, six 2p coins and eight 1p coins. If a coin is removed from the bag, what is the probability that it will be a:

a) 10p coin?   b) 5p coin?   c) 2p coin?

d) 1p coin?   e) silver coin?   f) copper coin?

13) On a supermarket shelf there are 8 packets of plain crisps, 5 packets of cheese and onion crisps, 3 packets of salt and vinegar crisps and 4 packets of smokey bacon crisps. If a bag is removed from the shelf at random, what is the probability that it will contain:

a) plain crisps?   b) cheese and onion? c) salt and vinegar?

d) smokey bacon? e) any kind of flavoured crisps?

14) Each month of the year is written on a card and the twelve cards are then placed in a bag. If one of the cards is then removed from the bag, what is the probability that:

a) the first letter on the card is J?b) the first letter on the card is M?

c) the first letter on the card is A?d)the last letter on the card is R?

e) the last letter on the card is Y?

15) A bag contains 40 counters, 8 of which are red, 12 of which are yellow, 4 of which are green and 16 of which are blue. If a counter is removed from the bag, what is the probability that it is:

a) red?   b) yellow?   c) green?

d) blue?   e) red or yellow?   f) red or green?

16) If a die is thrown, what is the probability that the score will be:

a) a six?
b) an odd number?
c) an even number?

d) a multiple of 3?
e) a prime number?
f) a square number?

17) Twelve counters numbered 1 to 12 are placed in a bag. If a counter is removed from the bag, what is the probability that the number on it will be:

a) a prime number?
b) a square number?
c) an even number?

d) a multiple of 3?
e) a multiple of 5?
f) a multiple of 4?

18) Twelve counters lettered A, B, C, D, E, F, G, H, I, J, K and L are placed in a bag. If a counter is removed from the bag, what is the probability that the letter on it will be:

a) a vowel?
b) a consonant?

c) any letter of the word CAGE?

d) any letter of the word BLEACH?

19) A pack of 52 playing cards is shuffled thoroughly and a card is then removed. What is the probability that the card:

a) is an ace?
b) is any king, queen or jack?

c) shows any number from 2 to 10?

d) shows any even number?

e) shows an odd number?

20) A pack of 52 playing cards is shuffled thoroughly and a card is then removed. What is the probability that the card:

a) is a king?
b) is the king of hearts?

c) is a red king?
d) is not a king?

21) A pack of 52 playing cards is shuffled thoroughly and a card is then removed. What is the probability that the card:

a) is a red ?   **b)** is a heart?

c) is an even heart?**d)** is the 4 of hearts?

22) A pack of 52 playing cards is shuffled thoroughly and a card is then removed. What is the probability that the card:

a) is a 5, 6 or 7?   **b)** is the 5, 6, or 7 of hearts?

c) is a red 5, 6 or 7?**d)** is not the 5, 6 or 7 of hearts?

23) 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?

24) 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?

25) 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?

26) 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?

27) An ordinary die is thrown.

    a) What is the probability of obtaining a 5?

    b) What is the probability of not obtaining a 5?

    c) What do you notice about these two results?

    d) What is the probability of obtaining a number greater than 4?

    e) What is the probability of obtaining a whole number less than 7?

    f) What is the probability of obtaining a number more than 6?

28) A letter is selected at random from the word PROBABILITY.

    a) What is the probability that the letter is a vowel?

    b) What is the probability that the letter is one of the first 2 letters of the alphabet?

    c) What is the probability that the letter is a consonant not next to a vowel?

29) A card is selected at random from a normal pack of playing cards.

    a) What is the probability of obtaining "a heart"?

    b) What is the probability of obtaining "a red 4"?

    c) What is the probability of obtaining "an ace"?

30) A counter is drawn from a box containing 10 red, 15 black, 5 green and 10 yellow counters.

Find the probability that the counter is:

    a) black   **b)** not yellow   **c)** red, black or yellow.