

1. A cloth bag contains a mix of black, white and red balls.

Selecting one ball at random, the probability of getting a black ball is 0.2 , while the probability of getting a white ball is 0.5 .

- (a) Selecting one ball at random, what is the probability of getting a red ball ?
- (b) If in total there are 5 white balls in the bag, how many black balls are there ?
- (c) If there are in total 3 red balls in the bag, how many balls are there altogether ?

2. A paper bag contains 5 red sweets, 7 green and 8 blue.

If a sweet is selected at random from the bag, find the probability that the sweet is: (2 d.p.)

- (a) red or blue    (b) not green    (c) green or red    (d) not blue

3. A tall metal box contains beads of many different colours.

The probability of selecting a bead of a particular colour is as follows:

white 0.2 ,    black 0.4 ,    red 0.3

What is the probability that a bead taken from the box will be:

- (a) black or red ?    (b) not white or black    (c) a different colour to red, black or white

4. A pack of cards consists of different numbers of white, black and red cards.

If the probability of choosing a white or red card is 0.6 and the probability of choosing a white or black card is 0.7, what is the probability of choosing each of the coloured cards individually ?

5. In a herd of 30 cattle there are 8 cows coloured black, 12 coloured white and 7 with no horns.

Find the probability that: (2 d.p.)

- (a) a cow is coloured white or black
- (b) a cow has horns
- (c) a cow is of a different colour to white or black

6. Scientists examining climate classify winters as mild, normal, hard or severe.

The probability that a winter will be mild or normal is 0.4 .

The probability that a winter will be severe is 0.1 .

- (a) What is the probability of having a hard winter?
- (b) If the probability that a winter is mild is three times the probability that it is normal, what is the probability that a winter will be mild or severe?

1. (a) 0.3 (b) 2 (c) 10

2. (a) 0.65 (b) 0.65 (c) 0.60 (d) 0.60

3. (a) 0.7 (b) 0.4 (c) 0.1

4. white 0.3, black 0.4, red 0.3

5. (a) 0.67 (b) 0.77 (c) 0.33

6. (a) 0.5 (b) 0.4