

- 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.
  - Selecting one ball at random, what is the probability of getting a red ball?
  - If in total there are 5 white balls in the bag, how many black balls are there?
  - If there are in total 3 red balls in the bag, how many balls are there altogether?
- 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.)
  - red or blue
  - not green
  - green or red
  - not blue
- 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:
  - black or red?
  - not white or black
  - a different colour to red, black or white
- 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?
- 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 cow is coloured white or black
  - a cow has horns
  - a cow is of a different colour to white or black
- 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.
  - What is the probability of having a hard winter?
  - 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