

# D3

## Data exam review

**1** There are 48 beads in a bag.  
Some of the beads are red and the rest of the beads are blue.  
Shan is going to take a bead at random from the bag.

The probability that she will take a red bead is  $\frac{3}{8}$

**a** Work out the number of red beads in the bag.

.....

(2)

Shan adds some **red** beads to the 48 beads in the bag.

The probability that she will take a red bead is now  $\frac{1}{2}$

**b** Work out the number of red beads she adds.

.....

(2)

(Total 4 marks)

**2** Younis spins a biased coin twice.  
The probability that it will come down heads both times is 0.36

Calculate the probability that it will come down tails both times.

.....

(Total 3 marks)

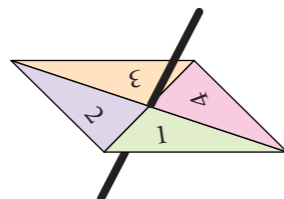
- 3** Four girls run in a race.  
The table shows the probability that each of three girls will win the race.

Name	Probability
Angela	0.5
Beverley	0.1
Caris	0.3
Danielle	

Calculate the probability that either Caris or Danielle will win the race.

.....  
(Total 3 marks)

- 4** Here is a 4-sided spinner.



The sides of the spinner are labelled 1, 2, 3 and 4.  
The spinner is biased.  
The probability that the spinner will land on each of the numbers 1, 2 and 3 is given in the table.

<b>Name</b>	1	2	3	4
<b>Probability</b>	0.2	0.1	0.4	

- a** Work out the probability that the spinner will land on 4

.....  
(2)

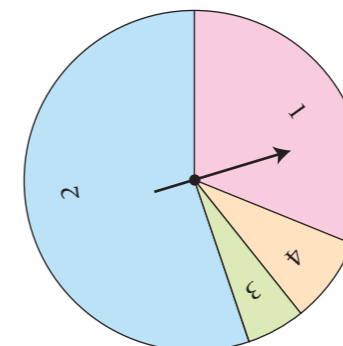
Tom spun the spinner a number of times.  
The number of times it landed on 1 was 85

- b** Work out an estimate for the number of times the spinner landed on 3

.....  
(1)

(Total 3 marks)

- 5** Here is a biased spinner.



When the pointer is spun, the score is 1 or 2 or 3 or 4  
The probability that the score is 1 is 0.3  
The probability that the score is 2 is 0.6

Hajra spins the pointer once.

- a** Work out the probability that

**i** the score is 1 or 2

.....

**ii** the score is 3 or 4

.....

(3)

Nassim spins the pointer twice.

**b** Work out the probability that

**i** the score is 1 both times,

.....

**ii** the score is 2 exactly once.

.....

(5)

(Total 8 marks)

**6** The sides of a fair six-sided dice are numbered from 1 to 6

The dice is thrown three times.

Find the probability that it shows a 1 at least twice.

.....

(Total 4 marks)

**7** A bag contains 6 red disks, 4 blue disks and 5 green disks.

A fair dice has 4 faces painted red and the other 2 faces painted blue.

Lisa takes a disk at random from the bag and records its colour.

Lisa then throws the dice twice and each time records the colour of the face it lands on.

Work out the probability that, of the three colours Lisa records, exactly two are the same.

.....

(Total 5 marks)

**8** A bag contains 3 black beads, 5 red beads and 2 green beads.

Gianna takes a bead at random from the bag, records its colour and replaces it.

She does this two more times.

Work out the probability that, of the three beads Gianna takes, exactly two are the same colour.

.....

(2)

.....

(Total 5 marks)

**9** 5 white socks and 3 black socks are in a drawer.



Stefan takes out two socks at random.

Work out the probability that Stefan takes out two socks of the same colour.

.....

(Total 4 marks)