

Statistics and Probability Revision

4

(a)

The table shows the probability of a child having different coloured eyes.

Blue	Brown	Green	Grey
0.15	0.37	0.36	0.12

The probability of having green eyes is three times the probability of having grey eyes. Complete the table.

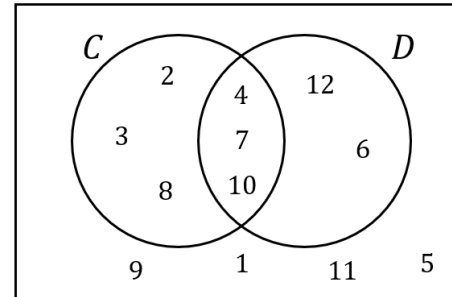
(b)

Seher has a biased six-sided dice. When rolled, the probability of the dice landing on a four is 0.35. Seher is going to roll the dice 500 times. Work out an estimate of the number of times it will land on a four.

175

(c)

The Venn diagram shows the numbers in each of the sets C and D and the universal set.



(i) List the members of $C \cup D$

{2, 3, 4, 6, 7, 8, 10, 12}

(ii) List the members of C'

{1, 5, 6, 9, 11, 12}

(iii) List the members of $C \cap D'$

{2, 3, 8}

(d)

Six numbers
4 x x 9 11 y
are written in order of size. The numbers have a median of 7.5 and a mean of 8. Find the values of x and y .

**$x = 6$
 $y = 12$**

(e)

A bag contains red, white and black counters. There are x red counters, $2x$ white counters and 6 black counters. When a counter is picked at random from the bag, the probability that it is a black counter is $\frac{1}{5}$. Find the value of x .

$x = 8$

(f)

Class 7A has 20 students and class 7B has 24 students. Both classes sat a History test. The mean score in 7A was 70.2 and the mean score in 7B was 73.25. Find the mean test score across both classes, giving your answer correct to 1 decimal place.

71.9 (1 d.p.)