20 A biased six-sided die is numbered 1, 2, 3, 4, 5 and 6.

The table shows the probability of each possible score when the die is rolled once.

Score	1	2	3	4	5	6
Probability	0.2	0.1	x	0.15	0.3	0.1

(a) Find the value of x.

$x =$ .....

(1)

The die is to be rolled twice.

(b) Find the probability that the sum of the scores for the two rolls is 10.

.....

(3)

(Total for Question 20 is 4 marks)

21 (a) Express 729 as a power of 3

.....

(1)

(b) Hence solve $3^{2x+5} = 729^{5-x}$

Show your working clearly.

$x =$ .....

(3)

(Total for Question 21 is 4 marks)