

15 The number of flowers which grow on a certain type of plant can be modelled by the discrete random variable X

The probability distribution of X is given in the table below.

x	0	1	2	3	4	5 or more
$P(X = x)$	0.03	0.15	0.22	0.31	0.09	p

15 (a) Find the value of p **[2 marks]**

15 (b) Two plants of this type are randomly selected from a large batch received from a local garden centre.

Find the probability that the two plants will produce a **total** of three flowers. **[3 marks]**

15 (c) (i) State **one** assumption necessary for the calculation in part (b) to be valid. **[1 mark]**

15 (c) (ii) Comment on whether, in reality, this assumption is likely to be valid. **[1 mark]**