

Extension 1 Probability Worksheet – Answers

1 $6/243$ 2 (i) $90/1024$ (ii) $106/1024$ (iii) $1023/1024$

3 $2 * 2!4!/6! = 2/15$ 4 (i) $1/100$ (ii) 0.285 (iii) 0.323

5 a. 60 b. 320

6 (i) [answers may vary.] (ii) $1 - 4q^3 + 3q^4$ (iii) $1 - q^2$ (iv) $1/3 < q < 1$

7 The probability distribution is as follows:

X	0	1	2
P (X)	$\frac{49}{100}$	$\frac{21}{50}$	$\frac{9}{100}$

8 $1/52$ 9 (i) $1/3$ (ii) $1/2$

10 The probability distribution is:

X	0	1	2	3	4
P (X)	$\frac{625}{1296}$	$\frac{500}{1296}$	$\frac{150}{1296}$	$\frac{20}{1296}$	$\frac{1}{1296}$