

## LC 2018: PAPER 2

### QUESTION 1 (25 MARKS)

#### Question 1 (a)

(i) Table

<b>MARKING SCHEME NOTES</b>	
<b>Question 1 (a) (i) [Scale 5C (0, 2, 3, 5)]</b>	
0:	• Correct answers outside box with no work
2:	• One correct entry • Work of merit
3:	• Four correct entries
5:	• Correct answer without work

	<b>Die 1</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>Die 2</b>	<b>1</b>	2	3	4	5	6	7
	<b>2</b>	3	4	5	6	7	8
	<b>3</b>	4	5	6	7	8	9
	<b>4</b>	5	6	<b>7</b>	<b>8</b>	9	10
	<b>5</b>	6	<b>7</b>	8	9	<b>10</b>	11
	<b>6</b>	7	8	9	10	11	<b>12</b>

(ii)  $P(7 \text{ or } 11) = \frac{\text{Number of 7's or 11's}}{\text{Number of numbers}}$   
 $= \frac{8}{36} = \frac{2}{9}$

<b>MARKING SCHEME NOTES</b>	
<b>Question 1 (a) (ii) [Scale 5B (0, 2, 5)]</b>	
0:	• Probability > 1, without work
2:	• Work of merit
5:	• Correct answer without work

	<b>Die 1</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>Die 2</b>	<b>1</b>	2	3	4	5	6	7
	<b>2</b>	3	4	5	6	7	8
	<b>3</b>	4	5	6	7	8	9
	<b>4</b>	5	6	7	8	9	10
	<b>5</b>	6	7	8	9	10	<b>11</b>
	<b>6</b>	7	8	9	10	<b>11</b>	12

(iii)  $P(\text{Prime}) = \frac{\text{Number of primes}}{\text{Number of numbers}}$   
 $= \frac{15}{36} = \frac{5}{12}$

<b>MARKING SCHEME NOTES</b>	
<b>Question 1 (a) (iii) [Scale 5B (0, 2, 5)]</b>	
0:	• Probability > 1, without work
2:	• Prime Number identified • Work of merit
5:	• Correct answer without work

	<b>Die 1</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
<b>Die 2</b>	<b>1</b>	2	3	4	5	6	7
	<b>2</b>	3	4	5	6	7	8
	<b>3</b>	4	5	6	7	8	9
	<b>4</b>	5	6	7	8	9	10
	<b>5</b>	6	7	8	9	10	<b>11</b>
	<b>6</b>	7	8	9	10	<b>11</b>	12

#### Question 1 (b)

$P(\text{Ford or Not red}) = \frac{26}{30} = \frac{13}{15}$

	Ford	Renault
Red	7	4
Not red	11	8

<b>MARKING SCHEME NOTES</b>	
<b>Question 1 (b) [Scale 10C (0, 3, 7, 10)]</b>	
0:	• Probability > 1, without work
3:	• Any relevant work towards creating at least one correct probability • (18 + 8, 30 - 4, 18 + 19 - 11)
7:	• Significant work towards answer
10:	• Correct answer without work