1)

2 (a) (i)	4	1	
(ii)	5	1	
(iii)	4.75	3	**M1** for $1\times2+1\times3+17\times4+12\times5+6\times6+3\times7$ condone one slip **then** **M1** dependent result (190) ÷ 40
(b)	$\frac{190+3n}{40+n}$	2	**SC1** for their $190+3n$

2)

20	**(a)** 38	1	
	(b) 45 to 46	1	
	(c) 15 to 16	1	
	(d) 10 or 11	2	**SC1** 70 on answer line

3)

6 (a)	32.5 cao www4	4	**M1** for mid-values seen **M1** for use of Σfx with x's anywhere in each interval $(10\times15+30\times30+20\times45)$ **M1** ÷ 60 dependent on second M1
(b)	Histogram drawn	3	**B1** Bars correct positions and widths – no gaps **B2** Heights of bars 1, 1.5 and 2 (**B1** for any two correct or for heights in the ratio 2:3:4)

4)

8 (a)	**$5.5 < t \leqslant 6$**	**B1**	Condone poor notation
(b)	4.25, 4.75, 5.25, 5.75, 6.25, 6.75 $(2\times4.25+7\times4.75+8\times5.25+18\times5.75+10\times6.25+5\times6.75)$ (= 283.5) ÷ 50 or their $\sum f$ **5.67** www4	**M1** **M1** **M1** **A1**	At least 5 correct mid-values seen $\sum fx$ where x is in the correct interval allow one further slip Depend on second method After **M3** allow 5.7 isw conversion to mins/secs and reference to classes
(c) (i)	**17, 15**	**B1**	
(ii)	Rectangular bars of heights **11.3** and **15** Correct widths of 1.5 and 1 – no gaps	**B1ft** **B1ft** **B1**	ft their 17 divided by 1.5 ft their 15 11.3 plot between 11 and 12 include lines and 15 to be touching the 15 line
(iii)	**2.5** cao	**B1**	**[10]**

5)

3			**Throughout this question isw any cancelling or changing to other forms, after correct answer seen. Do not accept ratio or worded forms.**
(a)	0.4, 0.1 oe	1	
(b) (i)	1	1	
(ii)	0.7 oe ft	1**ft**	**ft** their first three probabilities
(c) (i)	0.04 oe	1	
(ii)	0.03 oe ft	2**ft**	**M1** for their 0.1 × 0.3
(iii)	0.12 oe ft	3**ft**	**ft** their 0.1, their 0.4 and their **(c)(i)** **M2** for their 0.4 × their 0.1 + their 0.1 × their 0.4 + 0.2 × 0.2 (or their **(c)(i)**) **or M1** for any two of these products added or two of each
(d)	0.147 oe ft	2**ft**	**ft** their **(b)(ii)**. **M1** for their 0.7 × their 0.7 × (1 – their 0.7)