



Q	Answer	Marks
1	The final cumulative frequency should be 35 (the total frequency), not 34 - the last value is wrong ($29 + 6 = 35$)	1
2	up to 60) 5 up to 70) 16 up to 80) 30 up to 90) 37 up to 100) 40	2
3	a) 9, 24, 42, 54, 60 b) $30 < a \leq 40$	3
4	a) She should plot each cumulative frequency at the upper end (upper class boundary) of the interval, not the midpoint b) 6 c) 15%	3
5	a) 6, 20, 46, 68, 80 b) points at (10,6),(20,20),(30,46),(40,68),(50,80) joined by a smooth curve through the origin c) approximately 28 cm (accept 26-29) d) approximately 16 cm (accept 14-19)	6
6	a) 4, 14, 31, 46, 55, 60 b) points at (10,4),(20,14),(30,31),(40,46),(50,55),(60,60) joined by a smooth curve c) approximately 29 minutes (accept 28-31) d) approximately 16% (accept 13-20%)	6
7	a) 6, 20, 32, 40 b) 20 c) 15	4
8	a) 23 b) 3 c) 50.4	4
9	a) approximately 32 (accept 31-34) b) approximately 18 (accept 15-21) c) Class B has the higher median (45 vs about 32) so did better on average; Class B has the smaller IQR (12 vs about 18) so its scores are less spread out	6
10	a) min 0.5, LQ approximately 3.75 (accept 3.5-4), median approximately 5.2 (accept 5-5.4), UQ approximately 6.8 (accept 6.5-7.1), max 9.5 b) approximately 18 (accept 15-21) c) Monday's median is higher so Monday's parcels were heavier on average; Monday's IQR is larger so Monday's weights varied more	6
11	a) 8, 30, 60, 74, 80 b) 46.7 cm c) 29.1 cm	6
12	a) 42 b) $30 < t \leq 45$ c) $30 < t \leq 45$ d) No; 24 out of 100 (24%) commute over 45 minutes, and 24% is less than a third	6
13	a) 6, 24, 52, 72, 80 b) $40 < s \leq 60$ c) 29 d) 35% e) Higher median this year (51 vs 46) so better on average; larger IQR this year (29 vs 24) so more spread out	7

14	a) 15, 50, 90, 110, 120 b) 7.8 minutes c) Yes, 110 out of 120 = 91.7%	5
----	--	---

Full worked solutions, written out by hand, are on the solutions sheet for this topic.