10) (a) \( 4 + 10 + 34 = 48 \) pigs in the first three class intervals.
So 50\(^{th}\) and 51\(^{st}\) pigs are in the interval \( 80 < w \leq 85 \Rightarrow \) This interval contains the median.

(b) Cumulative frequencies 4, 14, 48, 80, 96, 100

(c) See graph

(d) (i) \( Q_1 = 77 \) (blue line)
\( Q_3 = 84 \) (red line)
IQR = 84 – 77 = 7 kg

(ii) (See green line)
100 – 89 = 11 pigs

12) (b) (i) Cumulative Frequencies: 1, 3, 7, 14, 33, 35
(ii) (See graph on next page.)
(iii) \( Q_1 = £4.60 \) (approx) from red line; \( Q_3 = £5.20 \) (approx) from blue line.
So IQR = 5.20 – 4.60 = £0.60

10) (a) cumulative frequency values: 4, 11, 21, 37, 67, 80
(b)

(c) (i) \( 80 \div 2 = 40 \) so draw line across at 40 \( \Rightarrow \) median = 205 seconds
(ii) 3 minutes = 180 seconds, so draw line up at 180 \( \Rightarrow \) 31 customers waited less than three minutes. So 80 – 31 = 49 waited more than three minutes.
12) (b) (ii) Graph:

Cum Freq

Hourly Rate (£)

3 3.5 4 4.5 5 5.5 6

0 5 10 15 20 25 30 35