

8127 Cumulative frequency and box plots

- ① a) graph
b) 43

c) Yes, $\frac{44}{70} (=63\%) > \frac{42}{70} (=60\%)$

- ② a) graph
b) 26.5
c) 36.5

- ③ a) graph
b) 21-28
c) 47.5% - 60%

- ④ a) 57
b) min. weight & max. weight could be less than 40 and 80 respectively \therefore No

c) $\frac{11}{60} < \frac{15}{60}$ (25%)

- ⑤ a) 0.43

	male	female
median	252	276
IQR	73	71

Female runners take longer but spread is about the same

- ⑥ Comparison

- ⑦ a) box plot
b) Comparison
c) No, as it is possible all delays in the upper 25% are between 17 and 25 minutes

- ⑧ a) box plot
b) Ben, lower IQR and range

- ⑨ a) box plot
b) comparison

- ⑩ a) i) box plot
ii) $\frac{10}{25}$

b) class intervals for cumulative freq. should be $0 < a \leq 30, 40, 50$ etc.

- ⑪ a) 0.75
b) 20

	1st half	2nd half
median	5.3	4.75
IQR	0.75	0.75
range	2.2	2.45

Players ran less in the 2nd half on average, spread is roughly equal

- ⑫ a)

	Age 16	Age 18
median	180	240
IQR	80	70
range	230	250
HV	310	380
LV	80	180

18 year old earned higher average, and IQR varied less

- b) 150