

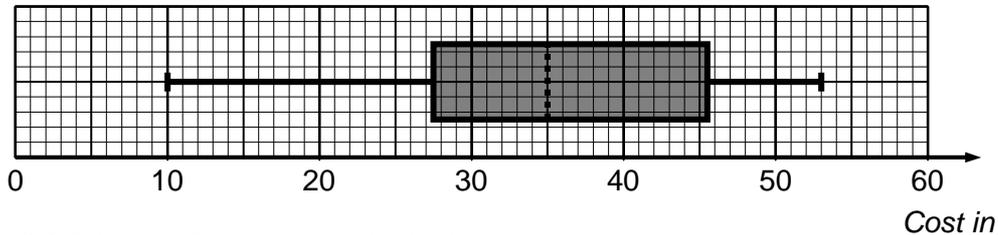
Representation of Data

Box Plots

3) June 05

(i) Lower Quartile is £2.75, Median is £3.50, Upper Quartile is £4.55

(ii)



(iii) (a) Prices in B are less variable than in A

(b) Distribution of A is more symmetrical than B which has negative skew

2) Jan 01

ia) Median = 75

b) LQ = 71 or 70, UQ = 83, so IQR = 12 or 13

ii) Proper scale used, box-plot drawn for males

iii) Boxplot drawn for females

iv) e.g. median for female data is lower than that for males
the distribution for females is more symmetrical than that for males etc

6) Jan 03

(i) (a) 22 (b) 22

(ii) (a) $30 - 15 = 15$ (b) $42 - 15 = 27$

(iii) Median number of cigarettes smoked is the same for males and females/smallest number of cigarettes smoked is the same for males and females.
Number of cigarettes smoked by males is more variable than that smoked by females (bigger interquartile range)/largest number of cigarettes smoked by males is much bigger than for females

1	0	4	5	5	8
2	0	2	2	3	
3	0	7			
4	2	4	7		
5	7				

(iv) (a) Key 3|7 means 37 cigarettes

(b) You can still see the original data values whereas in a box and whisker point you can only see min, max, quartiles and median.

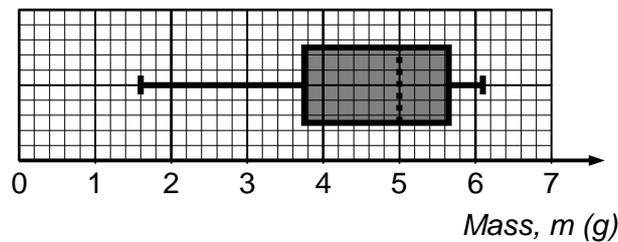
7) Jan 05

(i) The median is $\frac{4.8+5.2}{2} = 5.0$

The lower quartile is $\frac{3.4+4.1}{2} = 3.75$ and the upper quartile is $\frac{5.5+5.8}{2} = 5.65$.

The interquartile range is $5.65 - 3.75 = 1.9$

(ii)



(iii) Shivani's has positive skew whereas Emma's has negative skew.

Emma's interquartile range is 1.5 so Shivani's is more variable since her interquartile range is larger.

7) Nov 02

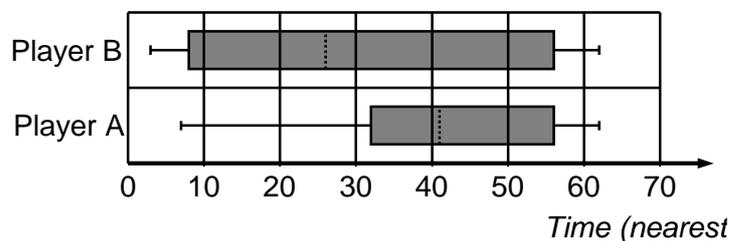
(v) (a) Boy 39 marks

- (b) Variability of girls and boys scores is similar (IQR's the same)
 Boys have greater range of scores
 Median of girls' scores is higher
 Both boys' and girls' distributions are negatively skewed

6) May 02

- (i) (a) Median = 41
 (b) Upper quartile = 56
 (c) Lower quartile = 32

ii)



(iii) Player B's game times are more variable than Player A's times (IQR bigger)

Player B average games time is shorter than Player B's (median smaller)

(iv) No you cannot – you only know *when* the game concluded not *why* it concluded.

For example Player A may have won all his games but Player B lost all his or vice versa

1) Nov 03

(i) (a) Median is the 14.5th item i.e. half way between the 14th and 15th i.e 30.

(b) Interquartile range is different between 21.5th ($Q_1 = 24$) and 7.5th ($Q_3 = 35$) i.e.
 $35 - 24 = 11$

(ii) On average females marry for the first time at a younger age (median is lower)/the age of females marrying for the first time is slightly less variable but generally similar in variability (slightly lower interquartile range)/range of ages of males when they marry for the first time is larger than for females.

