

4.4 Answers

GCSE Mathematics Statistics II : Handelling and Processing Data

4.4.1 Solution (Example)

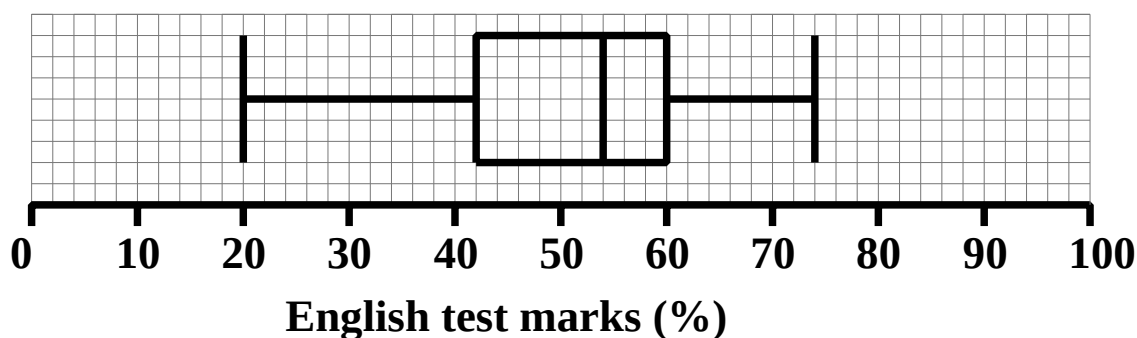
$$31 \text{ items of data} \Rightarrow \frac{31 + 1}{4} = 8$$

LQ is 8th item from left which is 42

Median is $2 \times 8 = 16$ th item from either end which is 54

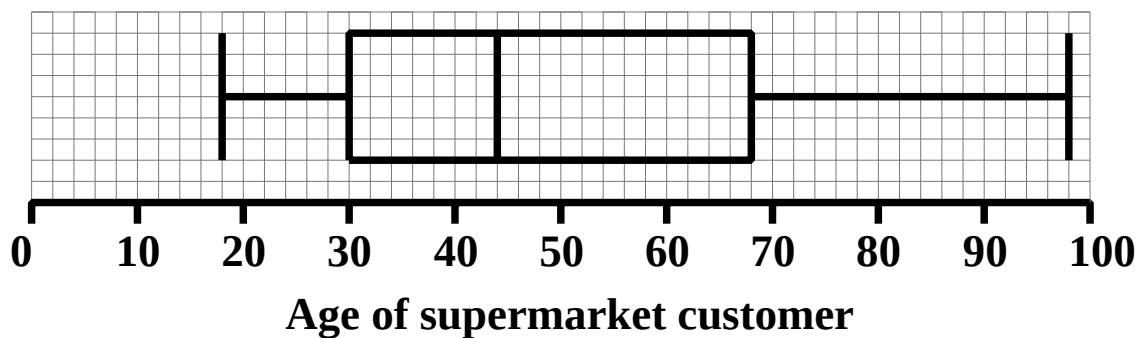
UQ is 8th item from right which is 60

$\therefore \text{IQR} = 18$



4.4.2 Solution (Exercise)

Answer 1



Answer 2

- (i) LQ is 18
- (ii) UQ is 56
- (iii) $\therefore \text{IQR}$ is 38
- (iv) median is 24

Skewed: lots of younger people have facebook accounts.

Answer 3

(a) Data in order is

12.9	12.9	13.4	13.4	13.6	13.8	14.1	14.2	14.4
14.6	14.8	15.2	15.2	15.3	15.7	15.7	15.7	15.8
16.1	16.4	16.4	17.0	17.6				

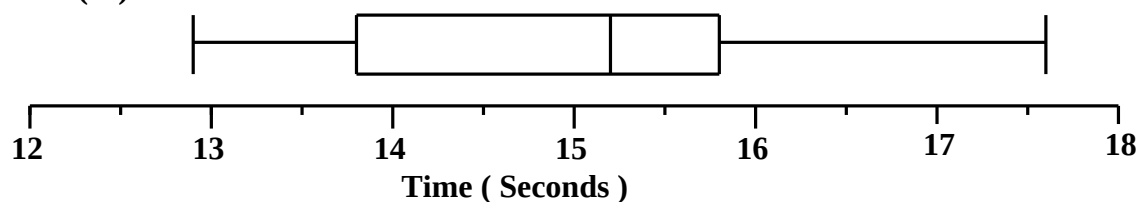
$$23 \text{ items of data} \Rightarrow \frac{23 + 1}{4} = 6$$

(b) LQ is 6th from left which is 13.8s

(c) UQ is 6th from right which is 15.8s

(d) Median is $2 \times 6 = 12$ th from either end which is 15.2s

(e)



(f) IQR = 2s

Answer 4

Data in order is

20p	20p	20p	50p	50p	£1	£2
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$$7 \text{ items of data} \Rightarrow \frac{7 + 1}{2} = 4$$

Median is 4th item from either end which is 50p.

Answer 5

(a) The data when put in order is,

£10	£10	£20	£20	£20	£20	£25
£30	£30	£40	£45	£50	£200	

$$(b) \quad 13 \text{ items of data} \Rightarrow \frac{13 + 1}{2} = 7$$

Median is 7th item of data from either end which is £25.

$$(c) \quad \text{Total is } £520 \Rightarrow \frac{520}{13} = £40$$

(d) The median is £25. The mean is distorted by the one person getting £200

(e) The mode is £20

Answer 6

(a) Data in order is;

03	12	14	23	25	27	31	34	36
37	37	44	46	47	52	53	54	56
56	59	62	66	68	72	74	76	83
85	85	91	93					

$$31 \text{ items of data} \Rightarrow \frac{31 + 1}{4} = 8$$

(b) LQ is 8th item from left which is 34

(c) UQ is 8th item from right which is 72

(d) Median is $2 \times 8 = 16$ th item from either end which is 53

(IQR = 38)

(e) Box and whisker diagram of the data.

