

1. Here are the ages of some volunteers at a food bank.

63 41 71 19 76 62 27 63 56

(a) Write down the median age.

(a)**62**.....

FYI: 9 ordered data items are: 19 27 41 56 {62} 63 63 71 76
mention of the 5th number \rightarrow 76 M1

Another 62 year begins volunteering

(b) Write down the median age now.

(b)**62**.....

FYI: 10 ordered data items are: 19 27 41 56 {62 62} 63 63 71 76
mention of 5th and 6th or 5.5th M1

(c) Work out the new mean age.

(c)**54**.....

FYI: total \div 10 = 540 \div 10

2. Here are the ages of the members of a choir.

41 34 52 23 58 61 43 38 52 63 27

(a) Write down the median age.

(a)~~43~~.....

FYI: 11 ordered data items are: 23 27 34 38 41 {43} 52 52 58 61 63
mention of the 6th number \rightarrow 61 M1

One of the 52 year old members leaves the choir

(b) Write down the median age now.

(b)~~42~~.....

FYI: 10 ordered data items are: 23 27 34 38 {41 43} 52 58 61 63

The mean age of the choir was 44.7 years old, to 1 decimal place.

(c) Work out the new mean age.

(c)~~44~~.....

FYI: total \div 10 = ~~440~~ \div 10

3. Here are the number of goals scored by members of a football team

4 1 7 27 11 1 5 13 3 7 3

(a) Write down the median number of goals scored.

(a)**5**.....

FYI: 11 ordered data items are: 1 1 3 3 4 {5} 7 7 11 13 27
mention of or writing unordered 6th number: 1 → M1

The best goal scorer joins another team.

(b) Write down the median number of goals scored now.

(b)**4.5**.....

FYI: 10 ordered data items are 1 1 3 3 {4 5} 7 7 11 13
mention of 5th and 6th data items M1

The teacher says the mean number of goals used to be 7.5

(c) Work out the mean number of goals scored by the team now.

(c)**5.5**.....

FYI: total \div 10 = 55 \div 10

4. Here are the handspans of a football team in centimetres.

14 13 11 16 13 16 11 15 14 18 13 16 15

(a) Write down the median handspan.

(a)~~14~~.....

FYI: 13 ordered data items are: 11 11 13 13 13 14 {14} 15 15 16 16 16 18
mention of 7th number 11 → 14 M1

Another player joins the team.

This player has an 11 cm handspan

(b) Write down the median handspan of the team now.

(b)~~14~~.....

FYI: 14 ordered data items are: 11 11 11 13 13 13 {14 14} 15 15 16 16 16 18
mention of 7th and 8th M1

The coach says the mean handspan used to be 14 cm (to the nearest cm).

(c) Work out the new mean handspan of the team.

(c)~~14~~.....

FYI: total ÷ 14 = 196 ÷ 14

5. Here are the number of library books read by members of a book club last month.

11 4 23 1 12 4 8 3 28 13 4 17 9

(a) Write down the median number of books read last month.

(a)**9**.....

FYI: *ordered data items are: 1 3 4 4 4 8 {9} 11 12 13 17 23 28*
mention of the 7th number → 8 M1

A new member joins the book club, he read 45 books last month.

(b) Write down the new median number of books read last month.

(b)**10**.....

FYI: *14 ordered data items are: 1 3 4 4 4 8 9 11 12 13 17 23 28 45*
mention of the 7th and 8th data items.

The mean number of books read used to be 10.5 books (to 1 decimal place).

(c) Work out the mean number of books read now.

(c)**13**.....

FYI: *total ÷ 14 = 182 ÷ 14*

6. Here are the ages of the members of a drama club.

14 11 15 11 12 13 13 11 14 11 17 12 11 13 15

(a) Write down the median age of the members.

(a)**13**.....

FYI: 15 ordered data items are: 11 11 11 11 11 12 12 {13} 13 13 14 14 15 15 17
mention of the 8th number \rightarrow 11 M1

All the 11 year old members leave the drama club.

(b) Write down the new median age.

(b)**13.5**.....

FYI: 10 ordered data items are: 12 12 13 13 {13 14} 14 15 15 17
mention of 5th and 6th M1

(c) Work out the new mean age.

(c)**13.8**.....

FYI: total \div 10 = $138 \div 10$

Answers

Q1: (a) 62, (b) 62, (c) 54

because 19 27 41 56 {62} 63 63 71 76

becomes 19 27 41 56 {62 62} 63 63 71 76

and $540 \div 10$

Q2: (a) 43, (b) 42, (c) 44

because 23 27 34 38 41 {43} 52 52 58 61 63

becomes 23 27 34 38 {41 43} 52 58 61 63

and $440 \div 10$

Q3: (a) 5, (b) 4.5, (c) 5.5

because 1 1 3 3 4 {5} 7 7 11 13 27

becomes 1 1 3 3 {4 5} 7 7 11 13 27

and $55 \div 10$

Q4: (a) 14, (b) 14, (c) 14

because 11 11 13 13 13 14 {14} 15 15 16 16 16 18

becomes 11 11 11 13 13 13 {14 14} 15 15 16 16 16 18

and $196 \div 14$

Q5: (a) 9, (b) 10, (c) 13

because 1 3 4 4 4 8 {9} 11 12 13 17 23 28

becomes 1 3 4 4 4 8 {9 11} 12 13 17 23 28 45

and $182 \div 14$

Q6: (a) 13, (b) 13.5, (c) 13.8

because 11 11 11 11 11 12 12 {13} 13 13 14 14 15 15 17

becomes 12 12 13 13 {13 14} 14 15 15 17

and $182 \div 10$