

Averages and Range

ANSWERS

1



Five consecutive whole numbers add up to 85. What is their median?

the median is the middle number

and here it is also the mean

$$85 \div 5$$

Answer 17

2



The temperatures at midday on six days were 6, -3, 8, -5, 1, 5, in °C. Work out the mean and the range.

$$6 - 3 + 8 - 5 + 1 + 5 = 12, 12 \div 6 = 2$$

$$8 - (-5) = 13$$

Answer mean 2°C, range 13°C

3



Five judges' scores have a mean of 6.4. Then it is found that a score of 3 was typed in as 8. What is the correct mean?

$$\text{total} = 5 \times 6.4 = 32, \text{ which is 5 too big}$$

$$27 \div 5$$

Answer 5.4

4



Six parcels have a mean mass of 5 kg. One parcel is taken away and the mean mass of the other five is 5.6 kg. What is the mass of the parcel taken away?

$$6 \times 5 = 30 \text{ kg}, 5 \times 5.6 = 28 \text{ kg}$$

$$30 - 28$$

Answer 2 kg

5



Four runners took a mean time of 10 minutes to finish a race. Six other runners took a mean time of 15 minutes. What was the mean time of all ten runners?

$$4 \times 10 = 40 \text{ and } 6 \times 15 = 90$$

$$(40 + 90) \div 10$$

Answer 13 minutes

6



The median of the six numbers 9, 2, 14, 6, 11, x is 8. Work out the value of x .

without x : 2, 6, 9, 11, 14

8 is between 6 and 9: x and 9 are the middle pair

$$(x + 9) \div 2 = 8$$

Answer $x = 7$

7



Four numbers have a mean of 8 and a range of 11. Two of the numbers are 6 and 9. Work out the other two numbers.

total 32, so the other two add up to 17

they are the smallest and largest, 11 apart

$$3 + 14 = 17 \text{ and } 14 - 3 = 11$$

Answer 3 and 14

8



A sixth number is added to 3, 7, 8, 12, 15 and the mean goes up by 1. Work out the median of the six numbers.

mean 9; new total $6 \times 10 = 60$

so $60 - 45 = 15$ is added

$$3, 7, 8, 12, 15, 15: (8 + 12) \div 2$$

Answer 10