Averages and algebra

1

The mean of x, $x + 3$, $2x$ and 9 is 8. Find x.

Total 8 × 4 = 32

$4x + 12 = 32$

$x =$

Answer _____

2

The mean of $2x$, $x + 4$ and $3x - 1$ is 13. Find x.

Total 13 × 3 = 39

$x =$

Answer _____

3

The mean of x, $x + 1$, $x + 5$, $2x$ and $3x - 2$ is 12. Find x.

Total × =

$x =$

Answer _____

4

Ali's scores in three quizzes are $3x$, $2x + 5$ and $x + 7$. His mean score is 16. Find x.

$x =$

Answer _____

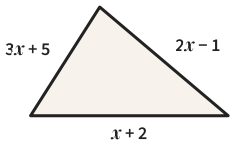
5

The mean of five numbers is 7.
Four of them are 4, 9, 6 and 8.
Find the fifth number.

Answer _____

6

The mean length of the sides of this triangle is 9 cm. Find x.



Answer _____

7

A class of 12 pupils has a mean score of 15.
A class of 18 pupils has a mean score of 20.
Find the mean score of all 30 pupils.

Answer _____

8

The numbers x, $x + 2$, $x + 6$ and $x + 8$ have a mean of 11. Find the largest number.

Answer _____

Averages and algebra *further practice*

9

The mean of 3, x, 7 and $2x$ is 7. Find x.

Answer _____

10

The mean of $x + 1$, $x + 4$ and $x + 10$ is 12.
Find the median of the three numbers.

Answer _____

11

The mean mass of 6 parcels is 4 kg.
One more parcel is added and the mean mass becomes 4.5 kg. Find the mass of the new parcel.

Answer _____

12

The mean of $2x + 1$, $3x - 4$ and $x + 9$ is $x + 5$. Find x.

Answer _____

13

8 boys have a mean height of 150 cm.
The mean height of all 20 pupils in the group is 156 cm. Find the mean height of the 12 girls.

Answer _____

14

The table shows the scores on a spinner.
The mean score is 2.4. Find x.

Score	1	2	3	4
Frequency	4	x	6	2

Answer _____

15

Four consecutive whole numbers have a mean of 12.5. Find the four numbers.

Answer _____

16

The mean of x, $2x$ and $3x$ is 8.
Jo says $x = 8$. Explain her mistake and find x.

Answer _____