

Name: Class:



Mode, mean, median, and range: find the missing number

a. Carl has the following data set: 69, 77, x, 56, 72
Given that the mean is 71, find the value of x.

81

91

b. Synthia has the following data set: 12, 7, 2, 20, u, 25
Given that the range is 25, is the value of u equal to 27 or 1?

1

27

c. Mineva has the following set of data: 32, 23, x, 15, 30, 12, 25
Given that the median is 23, is the value of x equal to 26 or 10?

26

10

d. Lina has the following data set : 2, 3, u, 4, 10.
Given that the mode is 2, What is the value of u?

4

2



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Mode, mean, median, and range: find the missing number

- a.** Carl has the following data set: 69, 77, x, 56, 72
Given that the mean is 71, find the value of x.

 81

 91

You know that,

$$\text{mean} = \frac{\text{Sum of all numbers}}{\text{Number of values in the data set}}$$

Let's proceed by finding the sum of the data set

$$69 + 77 + x + 56 + 72 = 274 + x$$

Now, find x by using the formula above.

$$71 = \frac{274+x}{5} \longrightarrow 71 \times 5 = 274 + x$$

$$x = 355 - 274 = 81$$

$$\text{So, } x = 81$$

- b.** Synthia has the following data set: 12, 7, 2, 20, u, 25
Given that the range is 25, is the value of u equal to 27 or 1?

 1

 27

To solve this, we replace u with either 1 or 27 and solve for the range.

So, replacing u with 27 we have:

12, 7, 2, 20, 27, 25

arranging from least to greatest we have

2, 7, 12, 20, 25, 27

$$\text{So, the range} = \text{highest number} - \text{lowest number} \\ = 27 - 2 = 25$$

So, you see that when u is 27, our range is 25.

- c.** Mineva has the following set of data: 32, 23, x, 15, 30, 12, 25
Given that the median is 23, is the value of x equal to 26 or 10?

 26

 10

When solving this, we replace x with either 26 or 10 and solve for the median.

So, replacing x with 10 we have

32, 23, 10, 15, 30, 12, 25

Put the numbers in increasing order and find the median.

10, 12, 15, 23, 25, 30, 32

You see that the middle number is at 23

So, the median is 23 when x = 10

- d.** Lina has the following data set : 2, 3, u, 4, 10.
Given that the mode is 2, What is the value of u?

 4

 2
