Name: _____ Date: _____

Mean, Median, and Mode

Circle group

Five friends count how many books each one read last month. The numbers are 2, 3, 3, 4, and 8. How can we describe the group with just one number? Mathematicians have three ways to find a middle, or typical, value. They are called the mean, the median, and the mode.

The mean is what most people mean by average. To find it, add up all the numbers. Then divide by how many numbers there are. Here, 2 plus 3 plus 3 plus 4 plus 8 equals 20. Then 20 divided by 5 is 4. So the mean is 4 books.

The median is the number in the exact middle when the list is in order. Our list is already in order. Count in from each end to find the middle one. The median is 3. If a list has an even number of values, the median is halfway between the two middle ones.

The mode is the number that shows up most often. In our list, the number 3 shows up twice. Every other number shows up once. So the mode is 3.

Each one tells a slightly different story. The child who read 8 books pulled the mean up. The median stayed at 3. When a list has one very big or very small number, the median can give a fairer picture of the group.

Questions

1. What are the three ways to find a typical value?

_____

_____

2. How do you find the mean?

_____

_____

3. What is the mean of 2, 3, 3, 4, and 8?

_____

_____

4. Why is the mode of the list 3?

_____

_____

5. Why might the median give a fairer picture than the mean when one number is very big?

_____

_____

Words to know

mean: the total of the numbers divided by how many there are
median: the middle number when a list is in order
mode: the number that appears most often
typical: usual or what you would expect
divided: split into equal groups or parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Mean, Median, and Mode

Triangle group

Suppose five friends count how many books each one read last month. The numbers are 2, 3, 3, 4, and 8. How can we describe the group with just one number? Mathematicians have three ways to find a middle, or typical, value. They are called the mean, the median, and the mode.

The mean is what most people mean by the word average. To find it, add up all the numbers and divide by how many there are. Here, 2 plus 3 plus 3 plus 4 plus 8 equals 20. Then 20 divided by 5 is 4. So the mean is 4 books.

The median is the number in the exact middle when the list is placed in order. Our list is already in order, so we can find the middle one by counting in from each end. The median is 3. If a list has an even number of values, the median is halfway between the two middle ones.

The mode is the number that appears most often. In our list, the number 3 shows up twice, and every other number appears only once. So the mode is 3.

Each of these tells a slightly different story. Notice that the child who read 8 books pulled the mean upward. The median stayed at 3 and was not affected much. When a list has one very big or very small number, the median can be a fairer picture of the group.

Questions

1. What are the three ways to find a typical value?

_____

_____

2. How do you find the mean?

_____

_____

3. What is the mean of 2, 3, 3, 4, and 8?

_____

_____

4. Why is the mode of the list 3?

_____

_____

5. Why might the median give a fairer picture than the mean when one number is very big?

_____

_____

Words to know

mean: the total of the numbers divided by how many there are
median: the middle number when a list is in order
mode: the number that appears most often
typical: usual or what you would expect
divided: split into equal groups or parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Mean, Median, and Mode

Square group

Suppose five friends count how many books each of them read last month, and the numbers are 2, 3, 3, 4, and 8. How can we summarize the entire group using just one number? Mathematicians have developed three methods for finding a middle, or typical, value, and these are called the mean, the median, and the mode.

The mean is what most people intend when they use the word average. To calculate it, add together all of the numbers and divide by how many numbers there are. In this case, 2 plus 3 plus 3 plus 4 plus 8 equals 20, and 20 divided by 5 is 4, so the mean is 4 books.

The median is the number in the exact center when the list is arranged in order. Our list is already arranged, so we can locate the middle value by counting inward from each end. The median is 3. If a list contains an even number of values, the median lies halfway between the two middle ones.

The mode is the number that appears most frequently. In our list, the number 3 appears twice, whereas every other number appears only once, so the mode is 3.

Each of these measurements tells a slightly different story. Notice that the child who read 8 books pulled the mean upward, while the median remained at 3 and was hardly affected. When a list contains one extremely large or extremely small number, the median can provide a fairer picture of the group.

Questions

1. What are the three methods for finding a typical value?

_____

_____

2. How do you calculate the mean?

_____

_____

3. What is the mean of 2, 3, 3, 4, and 8?

_____

_____

4. Why is the mode of the list 3?

_____

_____

5. Why might the median provide a fairer picture than the mean when one number is extremely large?

_____

_____

Words to know

mean: the total of the numbers divided by how many there are
median: the middle number when a list is in order
mode: the number that appears most often
typical: usual or what you would expect
divided: split into equal groups or parts

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Mean, Median, and Mode

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Mean, Median, and Mode

Easier · 207 words · Flesch-Kincaid grade 3.4

1. The mean, the median, and the mode.
2. Add up all the numbers and divide by how many there are.
3. The mean is 4.
4. The number 3 shows up most often, twice. The others show up once.
5. The big number pulls the mean up, but it barely changes the median.

Triangle: Mean, Median, and Mode

This passage · 221 words · Flesch-Kincaid grade 4.3

1. The mean, the median, and the mode.
2. Add up all the numbers and divide by how many there are.
3. The mean is 4.
4. The number 3 appears most often, twice, while the others appear once.
5. The very big number pulls the mean upward, but it barely changes the median.

Square: Mean, Median, and Mode

Harder · 231 words · Flesch-Kincaid grade 7.7

1. The mean, the median, and the mode.
2. Add together all of the numbers and divide by how many numbers there are.
3. The mean is 4.
4. The number 3 appears most frequently, twice, while the others appear once.
5. The large number pulls the mean upward, but it hardly affects the median.