NAME: _____

WHAT'S THE VIBE?

How to Calculate the Median

Environmental Scientist Eric Pallant studies how colleges can make their campuses more eco-friendly. Below is a table of colleges he's studied from around the world and how many students each one has.



College	Number of Students
North-Western University	64,081
University of Nigeria	36,000
Allegheny College	1,931
Brasilia University	38,475
Hamburg University of Applied Sciences	16,800

Explore:

- How does the number of students at Brasilia compare with the numbers of students at the other schools Pallant studied?
- What about Hamburg University of Applied Sciences – how does the number of students there compare with the numbers at the other schools?

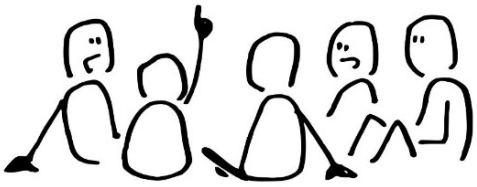
Apply:

If we want to figure out whether a particular item is in the top or bottom half of a data set, we calculate the *median*. The median is the middle of the data set.To do this, we order the data from smallest to largest (or largest to smallest), and find the data point in the center.

- Let's find the median number of students! First, list the colleges and the number of students they have from the one with the smallest number of students to the one with the largest number of students.
- What college is in the middle of that list? How many students does that college have? That number is the median of this data set.

Practice: Get better at finding the median by solving these problems.

Zoo Keeper Anne Knapp is responsible for deciding how big an enclosure should be for a given animal.



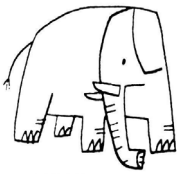
Here is a table of how many species each habitat at the Franklin Park Zoo has. (Some habitats have the same number of species.):

Habitat	Number of Species
African Penguin Coast	1
Aussie Aviary	2
Bird's World	30
Children's Zoo	14
Franklin Farm	8
Giraffe Savannah	3
Gorilla Grove	1
Kalahari Kingdom	7
Outback Trail	4
Raptor Ridge	2
Serengeti Crossing	3
Tropical Forest	33

Use the table above to answer the following questions.

- List the habitats and the number of species in each habitat in order from the most species to the fewest species.
- What is the median number of species in a habitat?
- If there are two data points in the middle of the data, calculate the mean of those data points to find the median. To find the mean of those two middle numbers, add them and divide that sum by two. That's the median.





Biostatistician Andrew Vickers uses data to research cancer. One of the problems that many cancer studies face is that not enough of the participants in the study are able to finish the study. The number of participants who finish a study is called the study's accrual. Vickers and his colleagues came up with several different ways that cancer studies can improve their accrual, like by changing how they give information about the study to participants.

Here is a table of several cancer studies that used Vickers' teams strategies and were able to have very high accrual rates. The table compares what percentage of people finished the study to how many the researchers ideally wanted to finish the study. Some of the percentages are over 100% because the researchers were able to exceed their goal!

Trial	Accrual Percent
Trial A	85
Trial B	137
Trial C	95
Trial D	135
Trial E	99
Trial F	100
Trial G	102
Trial H	55



Use the table above to answer the following questions:

- What is the median accrual rate for trials that used Vickers' strategies?
- What does this median tell you about the effectiveness of Vickers' strategies?