

MathFLIX CHALLENGE

Understanding Mean, Mode, Median and Range helps you learn how to do a Statistical Analysis.

The table below lists the job titles, number of employees and annual salaries for a small company. Study the data in the table carefully then complete the payroll calculations and answer the questions that follow.

Statistics Table

Job Title	# of Employees	Annual Salary	Payroll Calculations
Owner	1	\$130,000	\$130,000
Chief Executive	1	\$130,000	
Managers	2	\$35,000	
Technicians	3	\$24,000	72,000
Supervisor	1	\$18,000	
Assembly workers	7	\$15,000	
Total	15	Total	

What is the mean annual salary for the 15 employees of the company?

What is the mode salary?

What is the median salary?

This bar graph may help you answer each of these questions and better understand the relevance of data points when you analyze statistics.

Should the # of employees or the annual salaries be the data points you use to answer the mode and median questions?

*(Hint: Remember that **mode** is the data that appears **most** often and the **median** is the data in the **middle** when arranged least to greatest.)*

Bar Graph

# of Employees	7					
	6					
	5					
	4					
	3					
	2					
	1					
		\$15,000	\$18,000	\$24,000	\$35,000	\$130,000

Annual Salaries

Shade in the correct number of employees who earn each salary to discover what salary is earned by the greatest (*most*) number of employees.

There are 15 employees in this small company. As you look at the salaries, from least to greatest, how much does the 8th person earn? If you look at salaries in reverse, from greatest to least, how much does the 8th person earn? Can you make an observation about finding the median in a data set of odd numbers?

Which of the three averages, mean, mode, or median would you use to show that the average wage at the company is very good? Explain why. _____

Last year, the company did not do very well so the owner decided not to pay himself any salary and to cut the Chief Executive's salary in half. Use the back of this page to answer the following questions.

- Explain why the mean will change.
- Explain why the median will change.
- Explain why the mode will not change.