

# How do I calculate the Interquartile Range in Google Sheets?

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## RECOMMENDED CITATION

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The process of calculating the Interquartile Range (IQR) in Google Sheets involves several steps. Firstly, the data set needs to be organized in a column or row. Next, the median of the data set needs to be calculated using the MEDIAN function. Then, the first and third quartiles of the data set can be determined using the QUARTILE function. Finally, the IQR can be calculated by subtracting the first quartile from the third quartile. This value can be used to measure the spread or variability of the data set. Using these steps, the IQR can be easily calculated in Google Sheets for any given data set.

## Calculate the Interquartile Range in Google Sheets

The interquartile range, often denoted IQR, is a way to measure the spread of the middle 50% of a dataset. It is calculated as the difference between the first quartile (Q1) and the third quartile (Q3) of a dataset.

Note that *quartiles* are simply values that split up a dataset into four equal parts.

The IQR is often used to measure the spread of values in a dataset because it's known to be resistant to outliers. Since it only tells us the spread of the middle 50% of the dataset, it isn't affected by unusually small or unusually large outliers.

This makes it a preferable way to measure dispersion compared to a metric like the range, which simply tells us the difference between the largest and the smallest values in a dataset.

**This tutorial explains how to calculate the IQR for a given dataset in Google Sheets.**

**Example: How to Calculate IQR in Google Sheets**

**Use the following steps to calculate the interquartile range (IQR) of a dataset in Google Sheets.**

**Step 1: Enter the data.**

**First, enter all of the values of a dataset into one column:**

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fx |

	A	B	C	D
1	<b>Data values</b>			
2	14			
3	19			
4	20			
5	22			
6	24			
7	26			
8	27			
9	30			
10	30			
11	31			
12	36			
13	38			
14	44			
15	47			
16	47			
17	49			
18				
19				
20				
21				
22				

**Step 2: Calculate the first and third quartiles.**

Next, we'll use the **QUARTILE()** function to calculate the first (Q1) and third (Q3) quartiles of the dataset.

Note that this function uses the following syntax:

**QUARTILE(data, quartile\_number)**

**where:**

**data:** An array of data values  
**quartile\_number:** The quartile to calculate

The following image shows the formulas to use to calculate Q1 and Q3 for this dataset:

fx	A	B	C	D	E
1	<b>Data values</b>				
2	14		<b>Q1</b>	23.5	=QUARTILE(A2:A17, 1)
3	19		<b>Q3</b>	39.5	=QUARTILE(A2:A17, 3)
4	20				
5	22				
6	24				
7	26				
8	27				
9	30				
10	30				
11	31				
12	36				
13	38				
14	44				
15	47				
16	47				
17	49				
18					
19					
20					

**Step 3: Calculate the IQR.**

Lastly, we can subtract the first quartile (Q1) from the third quartile (Q3) to obtain the interquartile range:

	A	B	C	D	E
1	<b>Data values</b>				
2	14		<b>Q1</b>	23.5	=QUARTILE(A2:A17, 1)
3	19		<b>Q3</b>	39.5	=QUARTILE(A2:A17, 3)
4	20		<b>IQR</b>	16	=D3-D2
5	22				
6	24				
7	26				
8	27				
9	30				
10	30				
11	31				
12	36				
13	38				
14	44				
15	47				
16	47				
17	49				
18					
19					
20					
21					
22					

**The interquartile range turns out to be 16.**

**This tells us the spread of the middle 50% of values in our dataset.**

**[How to Calculate the Interquartile Range \(IQR\) in Excel](#)**

**[How to Calculate Standard Deviation in Google Sheets](#)**

**[How to Calculate a Five Number Summary in Google Sheets](#)**

**[How to Make a Box Plot in Google Sheets](#)**