

What is the mode of a histogram and how is it determined? Can you provide an example?

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The mode of a histogram is the most frequently occurring value or class interval in a given set of data. It is determined by observing the tallest bar or peak in the histogram, representing the value or interval with the highest frequency. For example, in a histogram representing the ages of a group of students, the mode would be the age that appears most frequently, such as 20 years old. The mode can be useful in identifying the most common or popular value in a dataset.

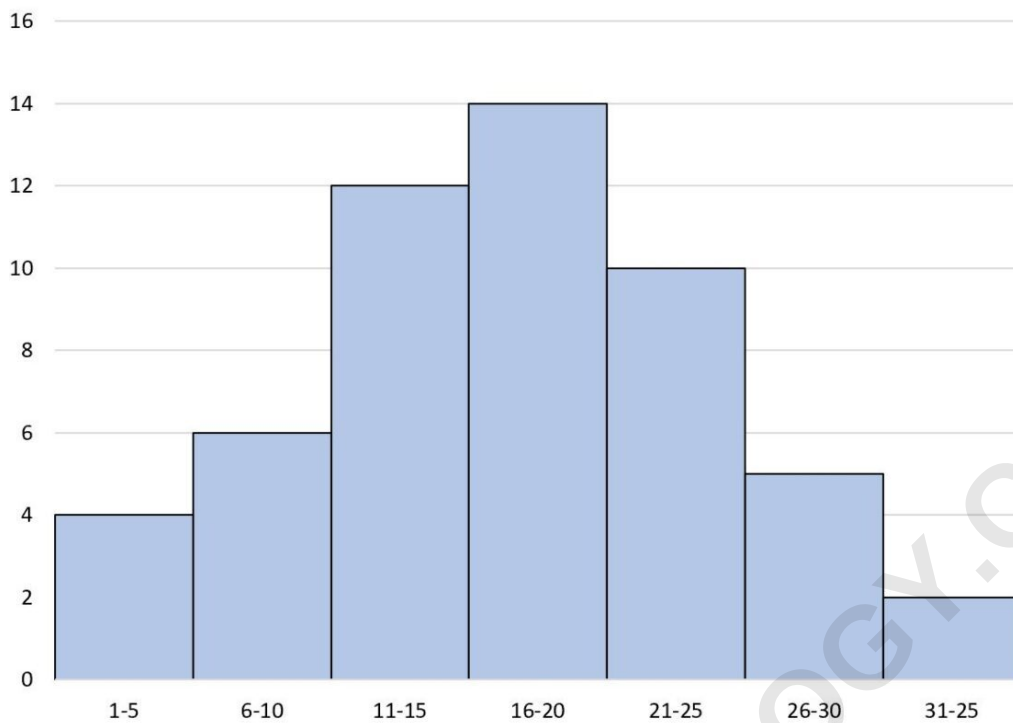
Find the Mode of a Histogram (With Example)

The mode of a dataset represents the value that occurs most often.

To find the mode in a histogram, we can use the following steps:

- 1. Identify the tallest bar.**
- 2. Draw a line from the left corner of the tallest bar to the left corner of the bar immediately after it.**
- 3. Draw a line from the right corner of the tallest bar to the right corner of the bar immediately before it.**
- 4. Identify the point where the two lines intersect. Then draw a line straight down to the x-axis. The point where the line hits the x-axis is our best estimate for the mode.**

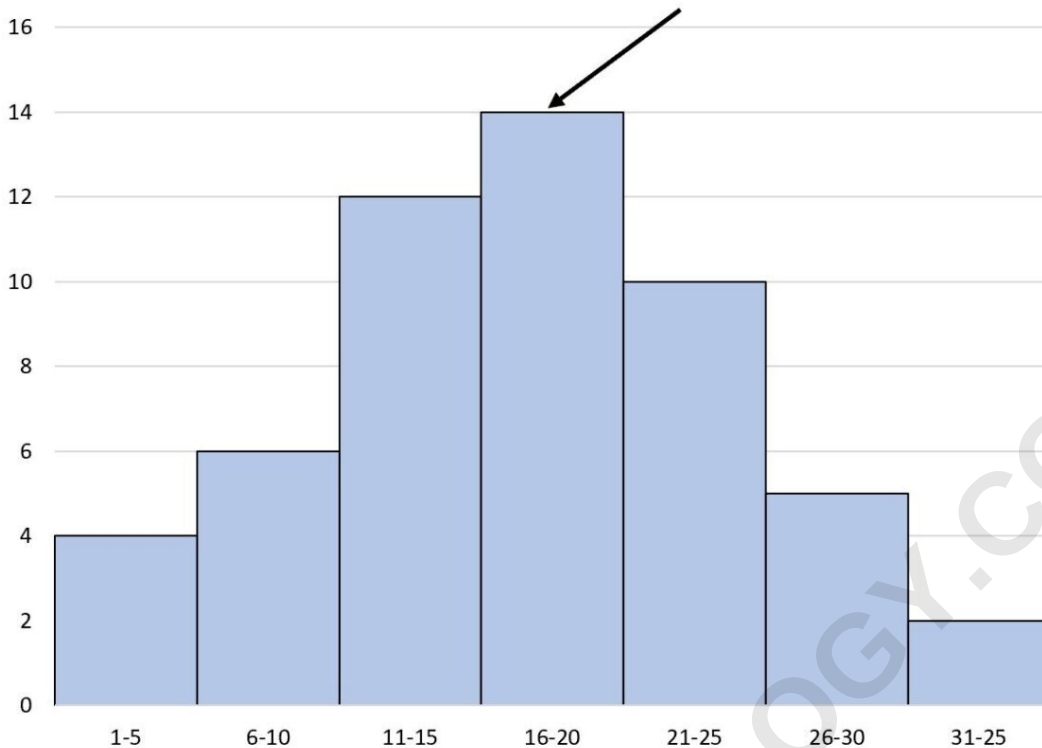
The following step-by-step example shows how to find the mode of the following histogram:



Step 1: Identify the Tallest Bar

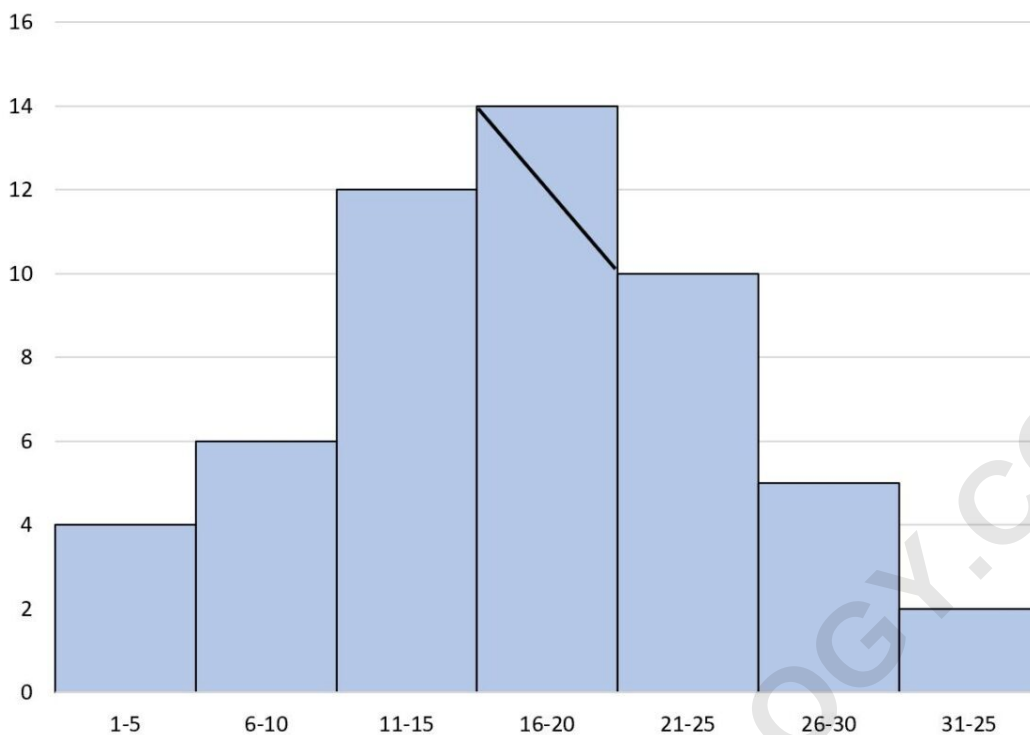
First, we need to identify the tallest bar in the histogram.

This is the bar with the bin range of 16 to 20:



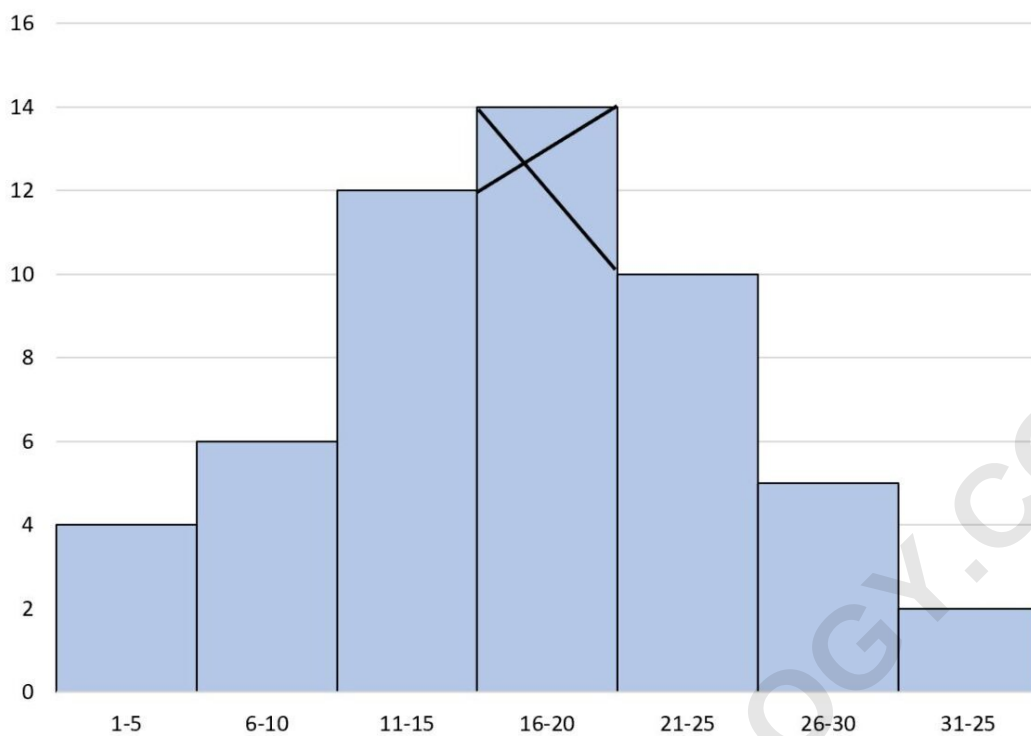
Step 2: Draw the First Line

Next, we need to draw a line from the left corner of the tallest bar to the left corner of the bar immediately after it:



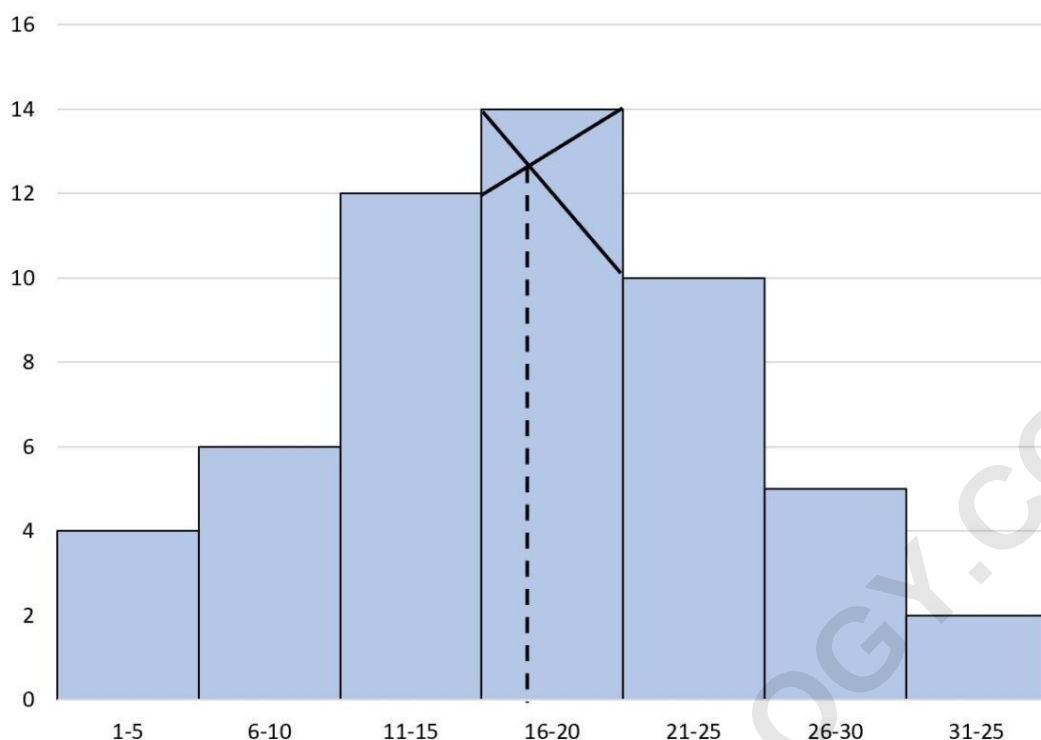
Step 3: Draw the Second Line

Next, we need to draw a line from the right corner of the tallest bar to the right corner of the bar immediately before it:



Step 4: Identify the Point of Intersection

Next, we need to identify the point where the two lines intersect. Then draw a line straight down to the x-axis:



The point where the line hits the x-axis is our best estimate for the mode.

In this example, our best estimate for the mode is roughly 17.

Note: Since the data in a histogram is grouped into bins, it's not possible to know the exact value of the mode but the method that we used here allows us to make our best estimate.

The following tutorials explain how to perform other common tasks involving histograms: