College students were asked how well they did on their first statistics exam. Their scores are shown below.

$$100, 98, 77, 76, 85, 62, 73, 88, 85, 92, 93, 72, 66, 70, 90, 100$$

We can use a histogram to represent the data.

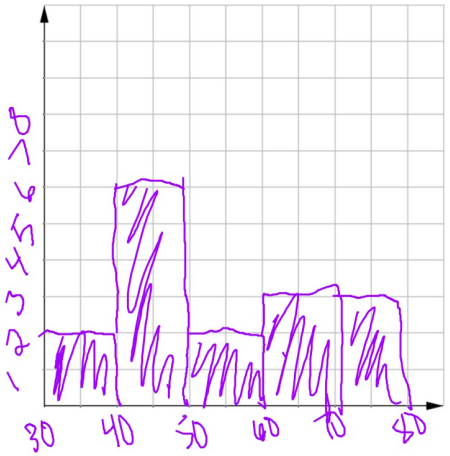
- A ***histogram*** is a bar-style data display showing frequency of data measured over intervals, rather than displaying each individual data value.
- Each interval width must be the same.
- Always title the graph and label both axes.
- Choose the appropriate scale on the y-axis and the appropriate intervals on the x-axis.
- Histograms are often used for:
  - larger sets of data
  - continuous data

Describe an interval. A range of values

Those same students from our first example were also asked how long in minutes it took them to complete the exam. The data is shown below.

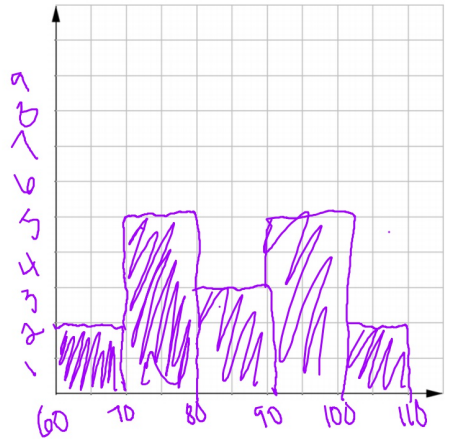
$$40.3, 42.4, 43.2, 44.1, 45.0, 55.7, 64.3, 70.3, 72.1, 32.3, 44.4, 54.5, 71.3, 66.1, 35.8, 67.2$$

Construct a histogram to represent the data.



Represent the following students' scores on a histogram.

$$100, 98, 77, 76, 85, 62, 73, 88, 85, 92, 93, 72, 66, 70, 90, 100$$



Determine the sets of data where it would be better to use a histogram instead of a dot plot. Select all that apply.

- ☑ Average daily temperatures for Albany, NY over a year
- ☐ Daily temperatures for Albany, NY over a month
- ☐ The results of rolling two dice over and over
- ☑ Height of high school football players statewide
- ☑ Finishing times of 125 randomly selected athletes for a 100-meter race

. Last year, the local men's basketball team had a great season. The total points scored by the team for each of the 20 games are listed below:

45, 46, 46, 52, 53, 58, 55, 56, 57, 58, 62, 62, 64, 64, 65, 67, 67, 76, 76, 89

Create a frequency table, and construct a histogram of the data.