

Name: _____

Date: _____

12.3 Notes: Dot Plots and Histograms

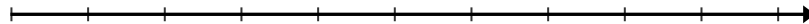
Algebra 1

Quantitative data on a **single variable** is often collected in order to understand how a characteristic of a group differs amongst the group or between groups. This data is often presented using various graphs for easy analysis.

I. Dot Plots

Survey Question: How many pets do you have?

Data (# of pets):



- a. What is the total number of Pets?
- b. What is the range of the data?
- c. What is the median?
- d. Is the data symmetrical?
- e. What percentage of students have more than 3 pets?

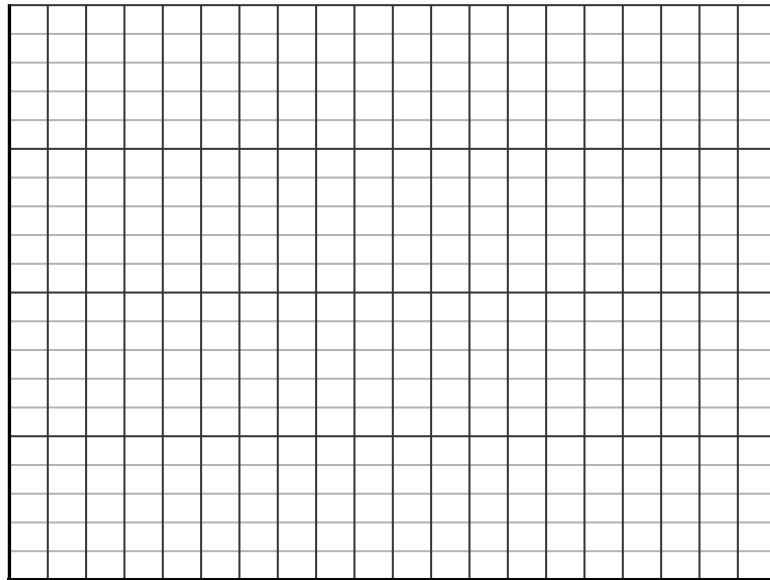
II. Histograms

Shown below are the current averages of all the students in your class in no particular order.

Period 2 (red class): 68, 95, 32, 79, 55, 59, 90, 60, 77, 54, 96, 86, 26, 85, 64, 76, 93, 81, 73, 83

Fill in the following frequency table and create a histogram.

Grade Interval	Tally	Frequency
21-30		
31-40		
41-50		
51-60		
61-70		
71-80		
81-90		
91-100		



a. What percentage of students have an average above 80?

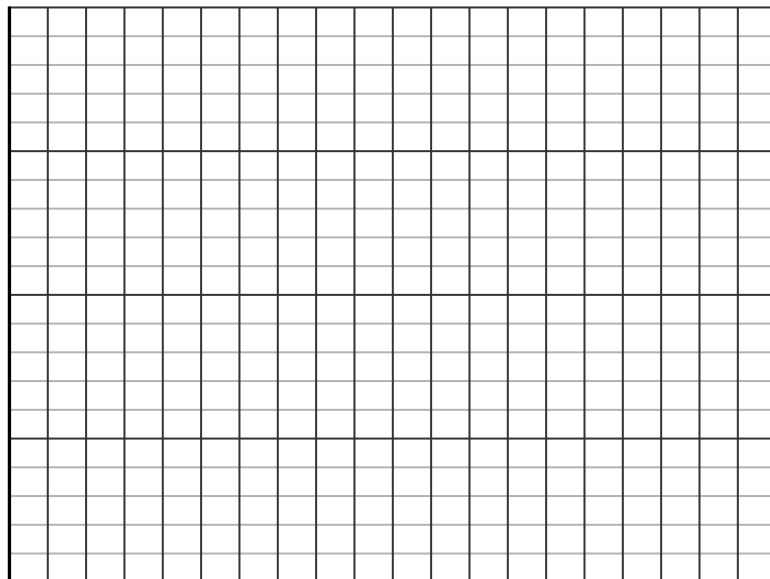
II. Histograms

Shown below are the current averages of all the students in your class in no particular order.

Period 3 (blue class): 72, 84, 26, 62, 49, 64, 71, 91, 78, 77, 84, 24, 75, 77, 55, 64, 94, 87, 87, 72, 77, 81

Fill in the following frequency table and create a histogram.

Grade Interval	Tally	Frequency
21-30		
31-40		
41-50		
51-60		
61-70		
71-80		
81-90		
91-100		



b. What percentage of students have an average above 80?

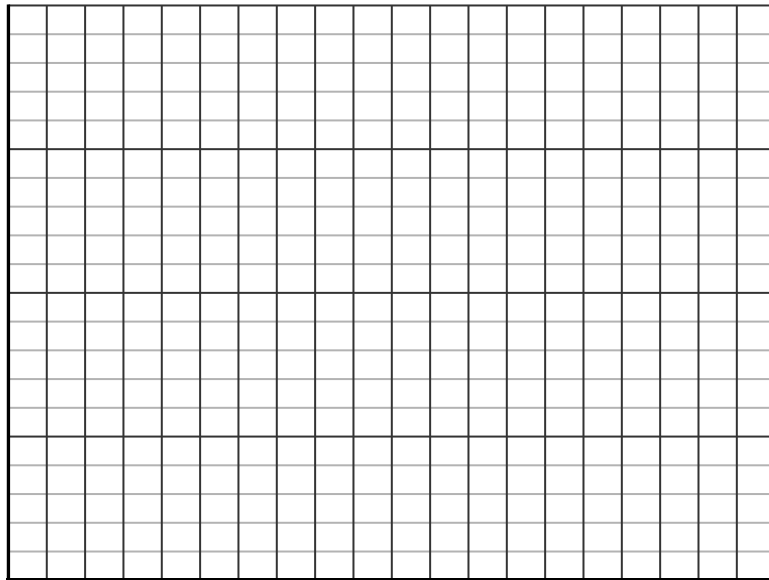
II. Histograms

Shown below are the current averages of all the students in your class in no particular order.

Period 8 (yellow class): 60, 97, 96, 62, 30, 76, 70, 27, 76, 85, 91, 57, 90, 68, 80, 100, 79, 86, 35, 78, 98, 79, 37, 71

Fill in the following frequency table and create a histogram.

Grade Interval	Tally	Frequency
21-30		
31-40		
41-50		
51-60		
61-70		
71-80		
81-90		
91-100		

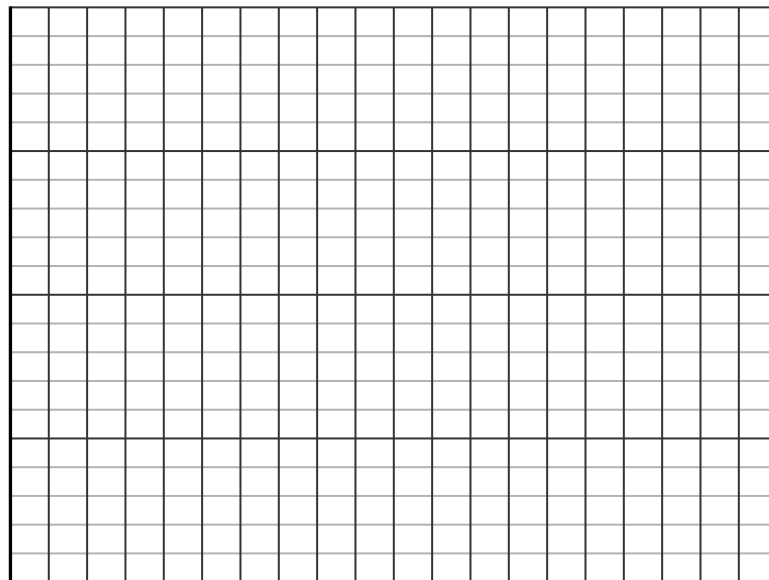


III. What percentage of students have an average above 80?

III. Cumulative Histograms

Use the data from the previous page to fill in the table and create a cumulative histogram.

Grade Interval	Frequency	Cumulative Grade Interval	Cumulative Frequency
21-30			
31-40			
41-50			
51-60			
61-70			
71-80			
81-90			
91-100			



- What percentage of students have an average less than or equal to 70?
- What 10 point interval contains the median?

IV. Reading Cumulative Frequency Tables

The cumulative Frequency table below shows the length of time that 30 students spent text messaging on a weekend.

Minutes Used	Cumulative Frequency
31–40	2
31–50	5
31–60	10
31–70	19
31–80	30

a. Which **10 minute interval** contains the first quartile?

- (1) 31-40
- (2) 41-50
- (3) 51-60
- (4) 61-70

b. What **10 minute interval** contains the median?