

#3 Histogram

3

1/28/16

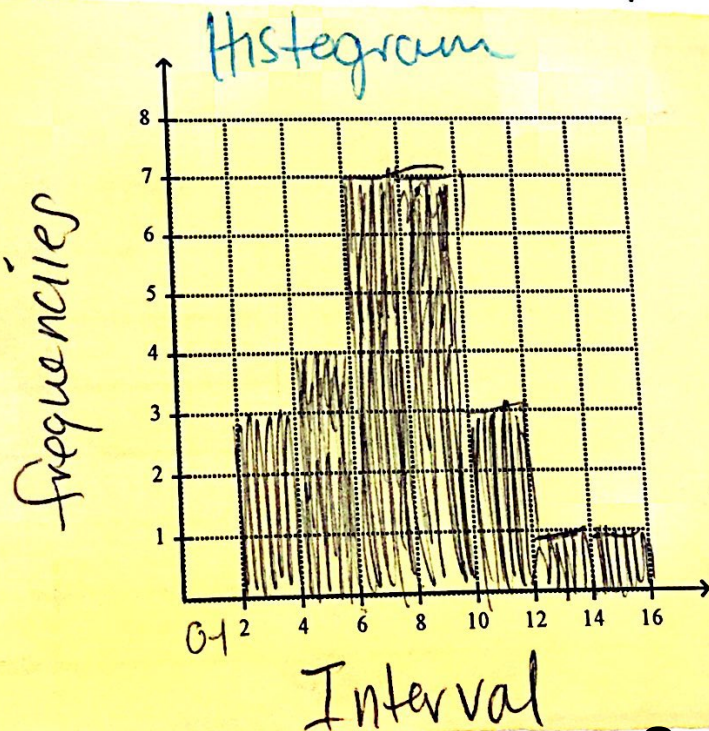
Data Set:

5 10 7 3 8 6 12 8 9 7 7 2 11
5 9 3 5 14 9 7 5 8 10 8 6 7

Interval	Frequency
0-1	0
2-3	3
4-5	4
6-7	7
8-9	7
10-11	3
12-13	1
14-15	1

← Frequency Table
a summary table that shows how often a value occurs within an interval

← when making a histogram count should be the same for the frequency axis



Histogram: A statistic graph that shows frequency

* a # on the edge of a bin (interval) is count in the bin to right

3 Continued

Relative Frequency Histograms

Definition: a Histogram that shows percentages in the frequency axis instead of count

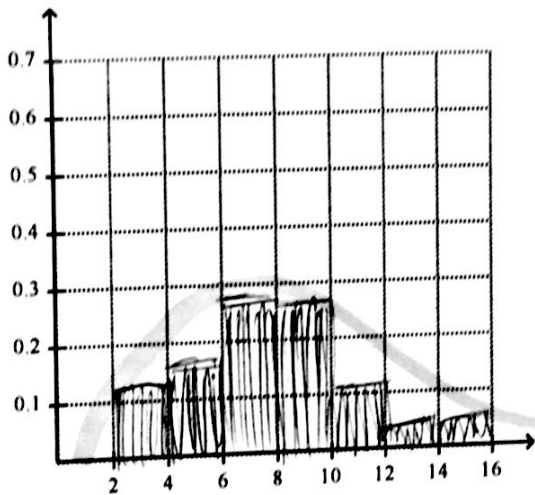
Interval	Frequency	Relative Frequency
0-1	0	$0/20 = 0$
2-3	3	$3/20 = .15$
4-5	4	$4/20 = .20$
6-7	7	$7/20 = .35$
8-9	7	$7/20 = .35$
10-11	3	$3/20 = .15$
12-13	1	$1/20 = .05$
14-15	1	$1/20 = .05$

$n = 20$ total total = 1 → 100%

of data points

Relative frequency Histogram

Percent Freq.

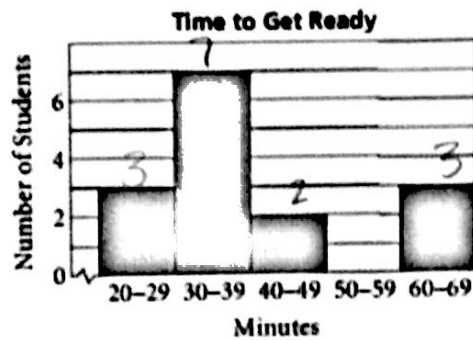


Interval

- * Should show the same
 - Shape - skewed Right
 - center
 - spread

Using Histograms

1. Students answered a survey question about how long it takes them to get ready in the morning. The histogram below shows the survey results.



a. Which interval indicates the answers most students gave?

30-39

b. How many students answered the question?

15

c. How many students take less than 40 minutes to get ready?

10

2. Nathan asked his classmates to estimate the number of hours they spend doing homework each week. The following data shows the results of his survey.

9 4 8 2 7 3 5 6 1 4 7
6 8 5 6 5 6 7 11 14 6 5

- a. Riley took Nathan's data and created a frequency table to organize the data. Check his work and see if he created the frequency table correctly.

Hours Spent Studying each Week	Frequency
0-2	2
3-5	7
6-8	10
9-11	2
12-14	1

Yes it is correct

- b. Finish making the histogram for the Riley's frequency table.

