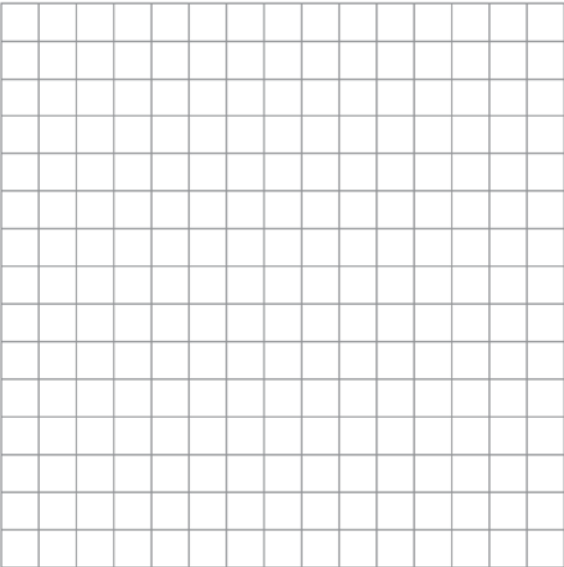


A.S.5: Frequency Histograms, Bar Graphs and Tables 1: Construct a histogram, cumulative frequency histogram, and a box-and-whisker plot, given a set of data

- 1 Ms. Hopkins recorded her students' final exam scores in the frequency table below.
- 2 In the time trials for the 400-meter run at the state sectionals, the 15 runners recorded the times shown in the table below.

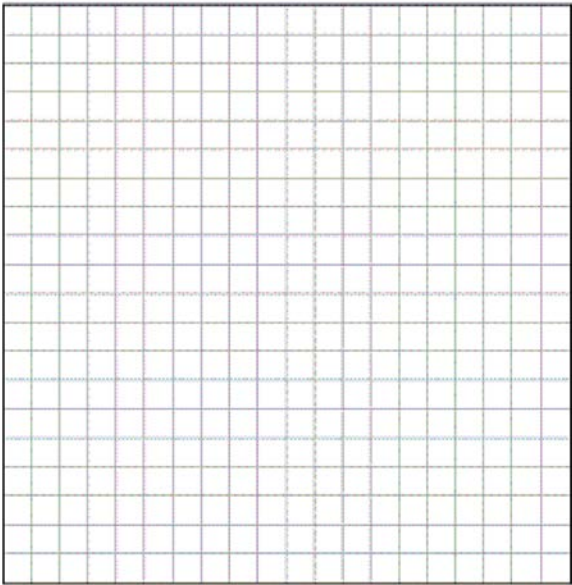
Interval	Tally	Frequency
61–70	###	5
71–80		4
81–90	###	9
91–100	### I	6

On the grid below, construct a frequency histogram based on the table.



400-Meter Run	
Time (sec)	Frequency
50.0–50.9	
51.0–51.9	
52.0–52.9	### I
53.0–53.9	
54.0–54.9	

- a Using the data from the frequency column, draw a frequency histogram on the grid provided below.

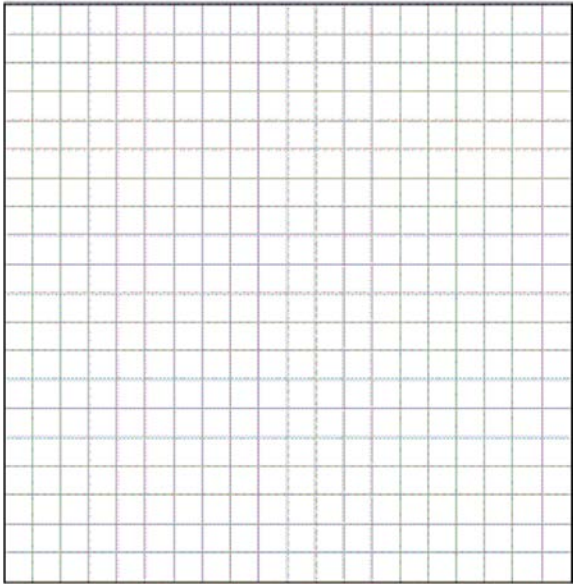


- b What percent of runners completed the time trial between 52.0 and 53.9 seconds?

- 3 The Fahrenheit temperature readings on 30 April mornings in Stormville, New York, are shown below.
- 41°, 58°, 61°, 54°, 49°, 46°, 52°, 58°, 67°, 43°, 47°, 60°, 52°, 58°, 48°, 44°, 59°, 66°, 62°, 55°, 44°, 49°, 62°, 61°, 59°, 54°, 57°, 58°, 63°, 60°
- Using the data, complete the frequency table below.

Interval	Tally	Frequency
40–44		
45–49		
50–54		
55–59		
60–64		
65–69		

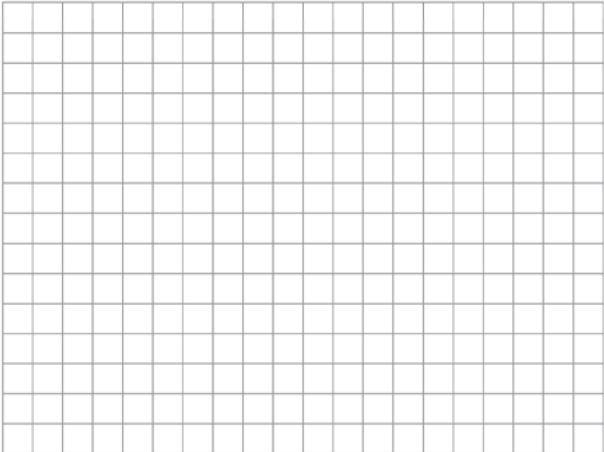
On the grid below, construct and label a frequency histogram based on the table.



- 4 The test scores for 18 students in Ms. Mosher’s class are listed below:
- 86, 81, 79, 71, 58, 87, 52, 71, 87, 87, 93, 64, 94, 81, 76, 98, 94, 68
- Complete the frequency table below.

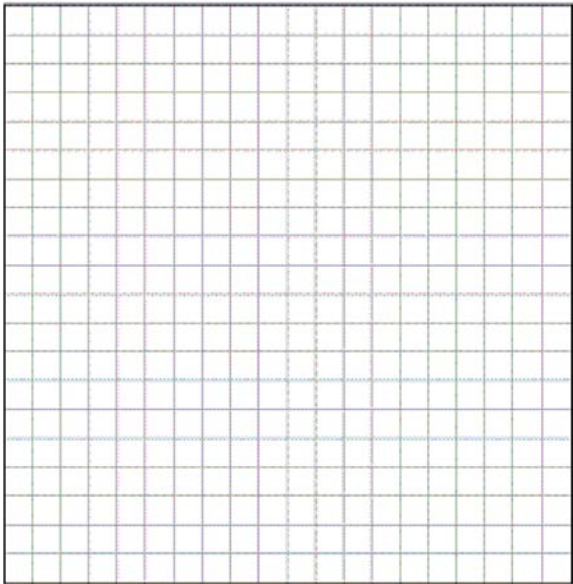
Interval	Tally	Frequency
51–60		
61–70		
71–80		
81–90		
91–100		

Draw and label a frequency histogram on the grid below.



- 5 The scores on a mathematics test were:
 70, 55, 61, 80, 85, 72, 65, 40, 74, 68, 84
 Complete the accompanying table, and use the table to construct a frequency histogram for these scores.

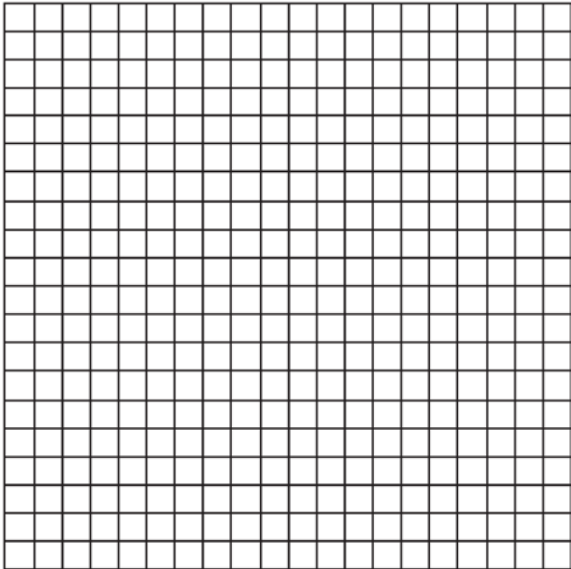
Score	Tally	Frequency
40–49		
50–59		
60–69		
70–79		
80–89		



- 6 The following set of data represents the scores on a mathematics quiz:
 58, 79, 81, 99, 68, 92, 76, 84, 53, 57,
 81, 91, 77, 50, 65, 57, 51, 72, 84, 89
 Complete the frequency table below and, on the accompanying grid, draw and label a frequency histogram of these scores.

Mathematics Quiz Scores

Interval	Tally	Frequency
50–59		
60–69		
70–79		
80–89		
90–99		



a Complete the tally sheet and frequency table below, and construct and label a frequency histogram for Sarah's grades using the accompanying grid.

- 34°, 37°, 31°, 36°, 30°, 32°, 32°,
34°, 30°, 37°, 31°, 30°, 30°, 31°,
36°, 34°, 36°, 32°, 32°, 30°, 37°,
31°, 36°, 32°, 31°, 36°, 31°, 35°

Temperature, in Degrees	Tally	Frequency
30		
31		
32		
33		
34		
35		
36		
37		

[illegible]

Interval (grades)	Tally	Frequency
61–70		
71–80		
81–90		
91–100		

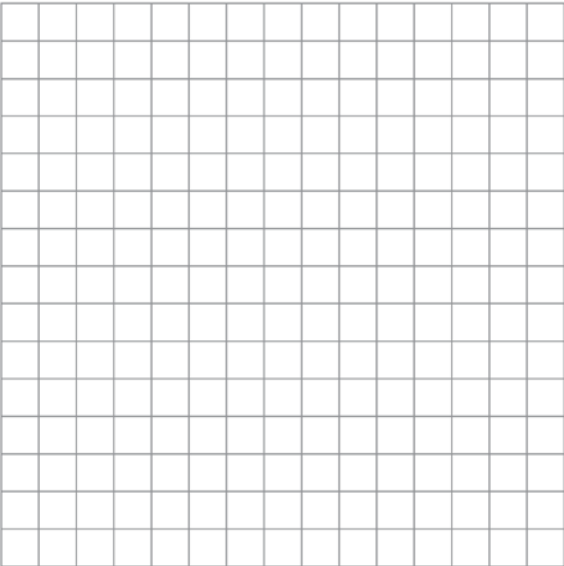
[illegible]

- 9 The following set of data represents the heights, in inches, of the 20 students in Ms. Fitzgerald's freshman class:
- 63, 56, 67, 59, 70, 69, 62, 74, 66, 72
- 67, 60, 70, 66, 67, 58, 68, 72, 63, 67
- Complete the frequency table below.

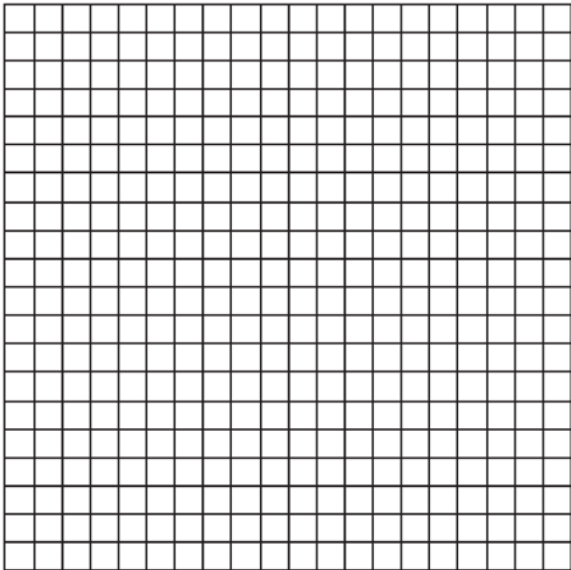
Heights of Students

Interval	Tally	Frequency
55–59		
60–64		
65–69		
70–74		

On the grid below, draw and label a frequency histogram for these data.

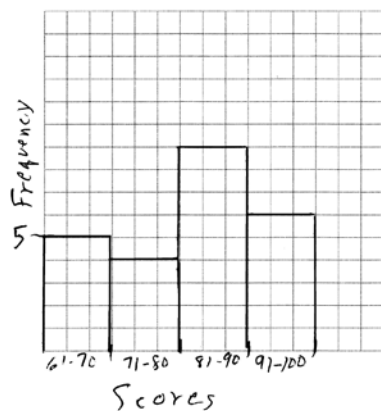


- 10 On a science quiz, 20 students received the following scores:
- 100, 95, 95, 90, 85, 85, 85, 80, 80, 80, 80, 75, 75, 75, 70, 70, 65, 65, 60, 55
- Construct a statistical graph, such as a histogram or a stem-and-leaf plot, to display this data. *[Be sure to title the graph and label all axes or parts used.]*



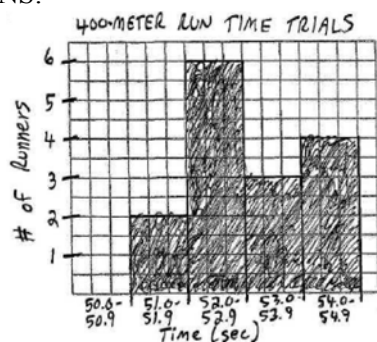
A.S.5: Frequency Histograms, Bar Graphs and Tables 1: Construct a histogram, cumulative frequency histogram, and a box-and-whisker plot, given a set of data
Answer Section

1 ANS:



REF: 081132ia

2 ANS:



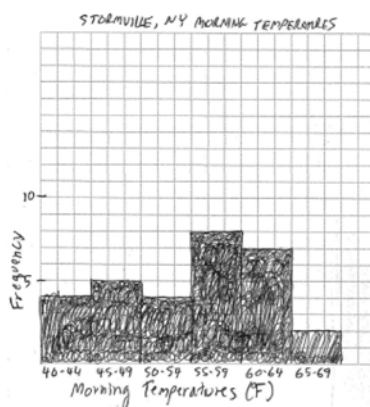
a)

b) 60%. $\frac{9}{15} = 60\%$

REF: 010032a

3 ANS:

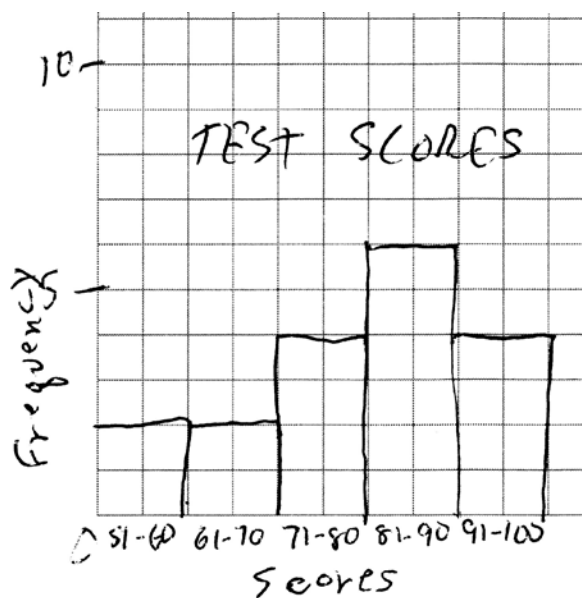
Interval	Tally	Frequency
40-44		4
45-49		5
50-54		4
55-59		8
60-64		7
65-69		2



REF: 060938ia

4 ANS:

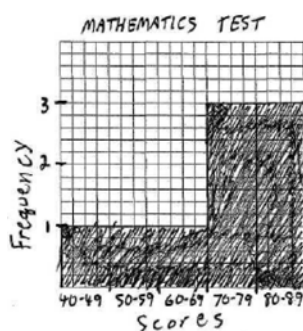
Interval	Tally	Frequency
51-60		2
61-70		2
71-80		4
81-90	/	6
91-100		4



REF: 011135ia

5 ANS:

SCORE	TALLY	FREQUENCY
40-49	/	1
50-59	/	1
60-69	///	3
70-79	///	3
80-89	///	3

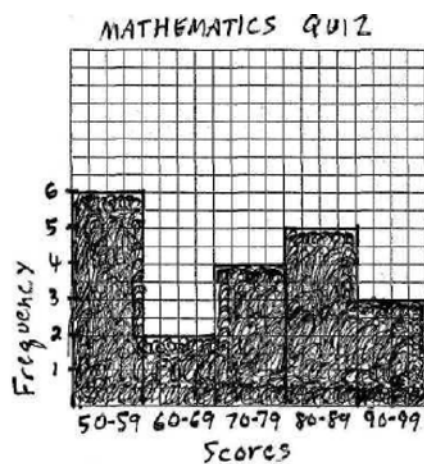


REF: 060033a

6 ANS:

Mathematics Quiz Scores

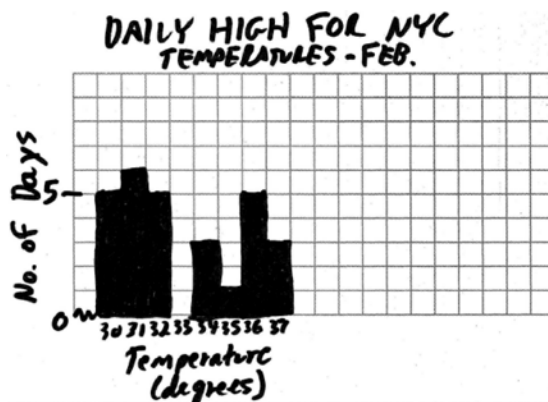
Interval	Tally	Frequency
50-59	/	6
60-69		2
70-79		4
80-89	/	5
90-99		3



REF: 080437a

7 ANS:

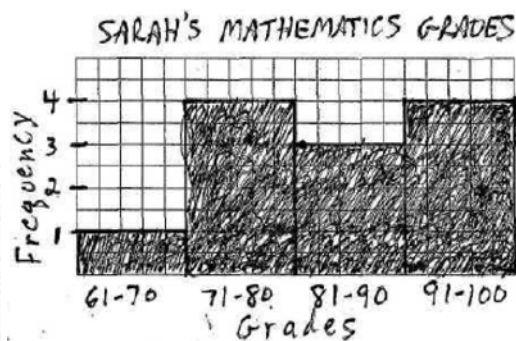
Temperature, in Degrees	Tally	Frequency
30		5
31		6
32		5
33		0
34		3
35		1
36		5
37		3



REF: 010939a

8 ANS:

Interval (grades)	Tally	Frequency
61-70		1
71-80		4
81-90		3
91-100		4

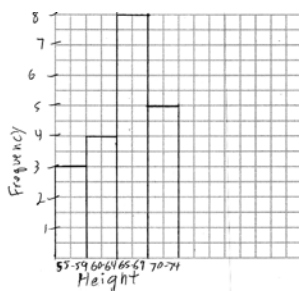


91-100. Since there are 12 grades, the 75th percentile begins with the ninth (12 x 75%) highest grade, which is in the 91-100 interval.

REF: 010334a

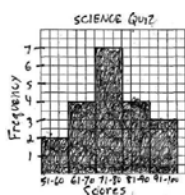
9 ANS:

Heights of Students		
Interval	Tally	Frequency
55-59		3
60-64		4
65-69		5
70-74		4



REF: 061536ia

10 ANS:



SCIENCE QUIZ SCORES	
5	5
6	0 5 5
7	0 0 5 5 5
8	0 0 0 0 5 5 5
9	0 5 5
10	0

7 | 5 means 75

REF: 010132a