

Refresher May 2

1. A factory is producing and stockpiling metal sheets to be shipped to an automobile manufacturing plant. The factory ships only when there is a minimum of 2,050 sheets in stock. The accompanying table shows the day, x , and the number of sheets in stock, $f(x)$.

Write the linear regression equation for this set of data, rounding the coefficients to ten-thousandth.

$$y = 98.8571x + 737.3333$$

Day (x)	Sheets in Stock (f(x))
1	860
2	930
3	1000
4	1150
5	1200
6	1360

State the correlation coefficient. Round the the nearest hundredth.

$$r = 0.99$$

Based on the correlation coefficient, characterize the fit as positive or negative and how strong of a fit it is. Explain your answer.

A Strong positive b/c the r is close to 1.

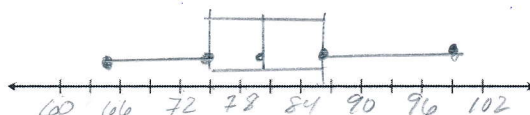
2. The accompanying stem-and-leaf plot represents Violet's test scores this year.

6	5	8					
7	2	3	3	3	3	9	
8	1	3	3	6	7		
9	6	9	9				

Key: 7 | 2 = 72

$\frac{16 + 5 = 81}{2}$
 $\frac{79 + 81 = 80}{2}$ median = 80
 min = 65 Q3 = 86.5
 Q1 = 75 max = 99

Construct a box-and-whisker plot of Violet's scores.



The students in a seaside school are to have extra swimming lessons if they cannot swim. The table below gives information about the students in grades 7, 8 and 9.

Complete the table.

	Can swim	Cannot swim	Total
Grade 7	120	60	180
Grade 8	168	11	179
Grade 9	172	3	175
Total	460	74	534

- How many students need swimming lessons? 74
- How many students are there in 8th grade? 179
- How many of the 7th grade students cannot swim? 60
- How many students in grades 7 and 8 can swim? 288
- How many students are there altogether in grades 7, 8, and 9? 534

Now create a two-way relative frequency table.

	Can swim	Cannot swim	Total
Grade 7	$\frac{120}{534} = 0.22$	$\frac{60}{534} = 0.11$	0.34
Grade 8	$\frac{168}{534} = 0.31$	$\frac{11}{534} = 0.02$	0.34
Grade 9	$\frac{172}{534} = 0.32$	$\frac{3}{534} = 0.01$	0.33
Total	$\frac{460}{534} = 0.86$	$\frac{74}{534} = 0.14$	1.01

- What is the relative frequency of students who are in 8th grade and cannot swim? $\frac{11}{534} = 0.02$
- What percentage of 9th grade students can swim? 31%
- What percentage of students cannot swim? 14%
- What percentage of students are 9th graders? 33%

Cumulative Frequency Histogram

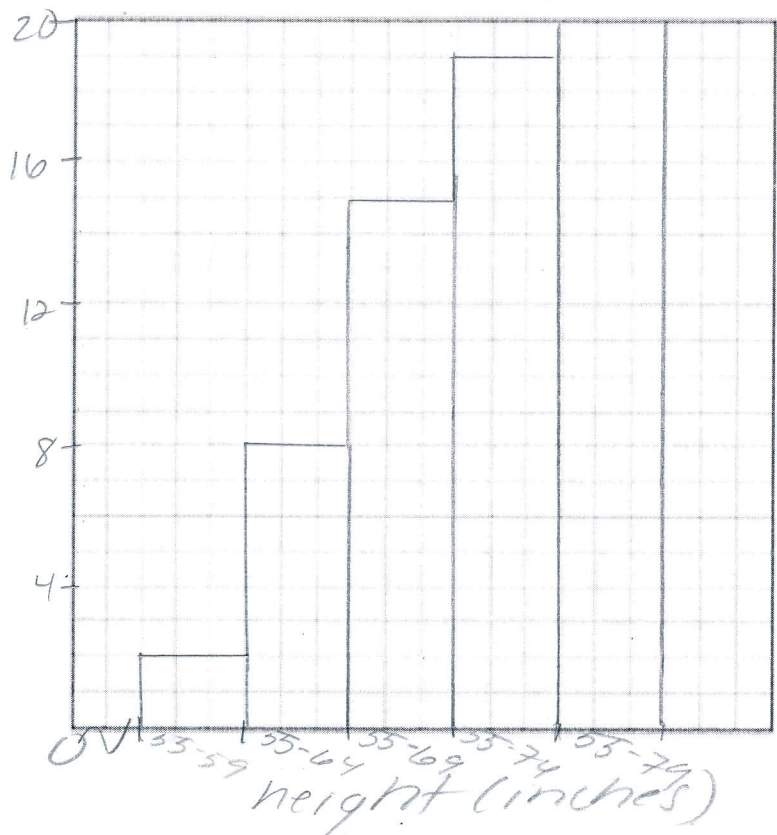
Mr. Residual recorded the height, in inches, of each student in his class. The results are recorded in the table below. Construct a cumulative frequency histogram.

60	59	70	65	64
61	58	72	75	66
65	67	63	62	68
68	69	74	61	70

intervals	tally	Frequency	Cumulative freq
55 - 59		2	2
60 - 64	1	6	8
65 - 69	11	7	15
70 - 74		4	19
75 - 79		1	20

Height of 20 students

of students



Frequency Histogram Page 30

The scores on a mathematics test were:
67, 70, 55, 61, 80, 85, 72, 65, 40, 74, 68, 84, 88

Complete the accompanying table, and use the table to construct a frequency histogram for these scores.

Score	Tally	Frequency
40-49		1
50-59		1
60-69		4
70-79		3
80-89		4

13 math scores

of students

