

Name KEY

Total 12 points

Please show all your work.

1. (7 pts) Data set: Amount (in \$) spent on books for a semester

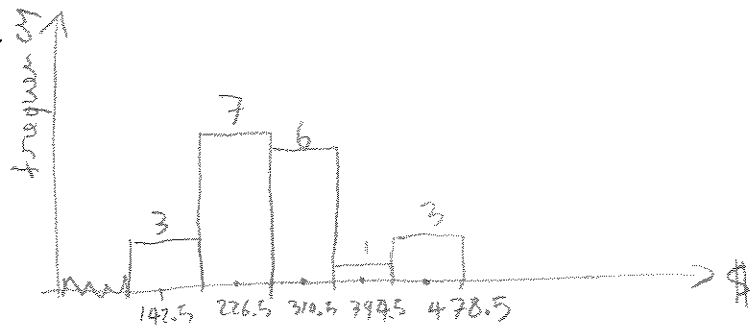
107 472 279 249 520 376 188 341 266 199  
 242 173 101 189 286 486 239 340 281 290

MAX 520  
 MIN 101  
 RANGE =  $520 - 101 = 419$   
 width =  $\frac{419}{5} = 83.8 \rightarrow 84$

Construct a frequency distribution table for the data set using 5 classes.

Class	Frequency	Midpoint	Relative frequency	Cumulative Frequency
101 - 184	3	142.5	$\frac{3}{20} = 15\%$	3
185 - 268	7	226.5	35%	10
269 - 352	6	310.5	30%	16
353 - 436	1	394.5	5%	17
437 - 520	3	478.5	15%	20
	20			

Construct a frequency histogram.

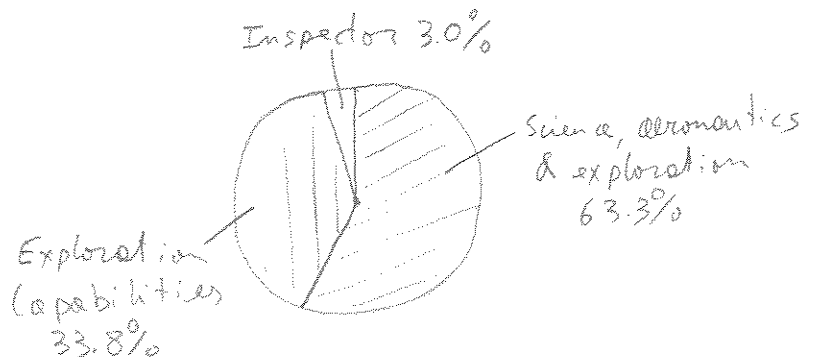


2. (5 pts) Use a pie chart to display the data: 2007 NASA budget (in millions of \$):

Science, aeronautics, and exploration 11,451  
 Exploration capabilities 6,108  
 Inspector General 534

} 18093 M\$ total { 63.3%  
 33.8%  
 3.0%

$360^\circ \times 63.3\% = 228^\circ$   
 $360^\circ \times 33.8\% = 122^\circ$   
 $360^\circ \times 3.0\% = 11^\circ$



# QUIZ #3

Name KEY

Total 12 points Please show all your work.

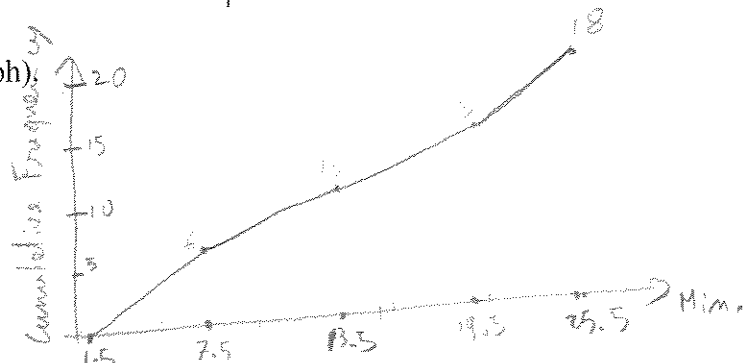
1. (8 pts) Data set: lengths (in minutes) of a sample of cellular phone calls:

2 20 10 8 20 13 23 3 7 18 7 22 4 24 8 5 15 17  
 MIN 2 MAX 24  
 RANGE 22  
 WIDTH  $\frac{22}{4} = 5.5 \rightarrow \underline{6}$

Construct a frequency distribution table for the data set using 4 classes.

Class	Frequency	Midpoint	Relative frequency	Cumulative Frequency
2-7	6	4.5	$6/18 = 33\%$	6
8-13	4	10.5	$4/18 = 22\%$	10
14-19	3	16.5	$3/18 = 17\%$	13
20-25	5	22.5	$5/18 = 28\%$	18
	18			

Construct an ogive (cumulative frequency graph).



2. (4 pts) The heights (in inches) of a sample of male students in a history class are given. Approximate the mean of the grouped data.

Height (in inches)	Frequency
63-65	5
66-68	6
69-71	8
72-74	7
75-77	3

$$\frac{\sum w_i \cdot x_i}{\sum w_i} = \frac{64 \cdot 5 + 67 \cdot 6 + 70 \cdot 8 + 73 \cdot 7 + 76 \cdot 3}{5 + 6 + 8 + 7 + 3}$$

$$= \frac{2021}{29} = 69.7 \text{ inches.}$$