

Warm Up
Use a graphing calculator

Number of sit-ups done by two groups of senior students:

Class Officers	Cheerleaders
15	29
22	28
28	27
25	27
34	26
38	25

Class Officers mean = 27
 median = 26.5
 mode = none
 standard deviation = 8.3

Cheerleaders mean = 27
 median = 27
 mode = 27
 standard deviation = 1.4

Class Officers: skewed right
Cheerleaders: symmetric

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Learning Targets

- I can construct a Histogram using the 3 steps given in class.
- I can describe the characteristics of a graph using SOCCS.

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Histograms

- shows the distribution of numerical variables
- no spaces between the bars
- does not show every data value in the way a dot plot, bar graph or stem plot does

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How to make a histogram:

- STEP 1 - Divide the data into "classes" or "bins" of equal size (find the range and divide by 10 then use your best judgment)
- STEP 2 - Count the number of individuals in each class (make a frequency table)
- STEP 3 - Draw your histogram. Classes go on the horizontal and counts (frequencies) go on the vertical.

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College or University	Percent Accepted
Harvard	11
Yale	16
Princeton	12
John Hopkins	32
New York	29
MIT	16
Drake	26
Carnegie Mellon	36
George Washington	49
Northwestern	33
American	72
Cornell	31

① $72 - 11 = \frac{61}{10} = 6.1 \rightarrow 7$

Classes	Frequency
11-17	4
18-24	3
25-31	3
32-38	3
39-45	1
46-52	1
53-59	1
60-66	1
67-73	1
74	1

S - skewed right
O - 72%
C - % accepted
C - median = 30%
S - range = 61%

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	% HS Grads 1990		% HS Grads (classes)	Frequency
MISSISSIPPI	63.8			
MISSOURI	70.3			
MONTANA	86.4			
NEBRASKA	84.2			
NEVADA	76.5			
NEW HAMPSHIRE	71.7			
NEW JERSEY	77.2			
NEW MEXICO	57.3			
NEW YORK	80.4			
NORTH CAROLINA	66.7			
NORTH DAKOTA	86.9			
OHIO	76.4			
OKLAHOMA	77.2			
OREGON	56.2			
PENNSYLVANIA	71.7			
RHODE ISLAND	64.9			
SOUTH CAROLINA	58.2			
SOUTH DAKOTA	79.9			
TENNESSEE	68.7			
TEXAS	65.4			
UTAH	79.5			
VERMONT	80.4			
VIRGINIA	69.9			
WASHINGTON	74.7			
WEST VIRGINIA	78			
WISCONSIN	82.7			
WYOMING	85.1			
MINNESOTA	89.4			

① range = $89.4 - 56.2 = 33.2$
 $\frac{33.2}{10} = 3.32$
 $\Downarrow 5$

②

55-59	
60-64	1
65-69	1
70-74	
75-79	
80-84	
85-89	1
90	

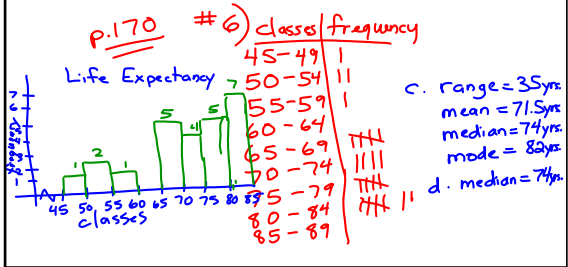
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Assignment:

Section 5.4 p. 167 #1, 3-6

Learning Targets

- I can construct a Histogram using the 3 steps given in class.
- I can describe the characteristics of a graph using SOCCS.



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