Answers

Chapter 8 Test Practice Data Set

Here is a table that gives the ages of all U.S. Presidents when they took office.

President	Age	President	Age
Washington	57	Cleveland	55
J. Adams	61	McKinley	54
Jefferson	57	T. Roosevelt	42
Madison	57	Taft	51
Monroe	58	Wilson	56
J.Q. Adams	57	Harding	55
Jackson	61	Coolidge	51
Van Buren	54	Hoover	54
W.H. Harrison	68	F.D. Roosevelt	51
Tyler	51	Truman	60
Polk	49	Eisenhower	61
Taylor	64	Kennedy	43
Fillmore	50	L.B. Johnson	55
Pierce	48	Nixon	56
Buchanan	65	Ford	51
Lincoln	52	Carter	52
A. Johnson	56	Reagan	69
Grant	46	G.H.W. Bush	64
Hayes	54	Clinton	46
Garfield	49	G. Bush	54
Arthur	51	Obama	47
Cleveland	47		
B. Harrison	55		

1. Create a grouped frequency table and histogram for the age of the U.S. Presidents when they took office. (Use 6 intervals, starting with age 40) See other page.

2. Find the mean and standard deviation. (3 sig figs) μ ($\bar{x}$ in calc) = 54.4 σ = 6.11

3. Find the five statistical summary. min: 42 Q_1: 51 med: 54 Q_3: 57 max: 69

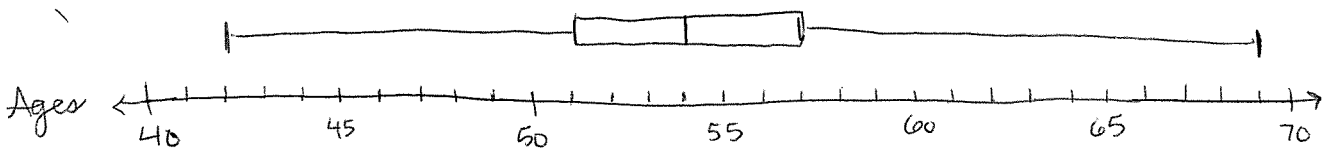
4. Create a box and whisker plot for the age of the U.S. Presidents when they took office.

5. Are there any outliers in the data set? Justify your answer. $IQR = Q_3 - Q_1 = 6$

$Q_3 + 1.5(IQR) = 66$

$Q_1 - 1.5(IQR) = 42$

3 outliers: 42, 68, 69



To help in making your table, after putting in you data, go to STAT; EDIT; Sort A and type L_1 (Hit 2nd and #1) Hit enter. Once it says DONE, if you go back to your data in L_1 it will go from smallest to largest.

ages	Freq.
$40 \leq x < 45$	2
$45 \leq x < 50$	7
$50 \leq x < 55$	14
$55 \leq x < 60$	12
$60 \leq x < 65$	6
$65 \leq x < 70$	3

6 intervals starting with age 40...
Highest age is 69 so if we go to 70

$70 - 40 = \frac{30}{6} = 5$

Each interval is 5 big

Histogram