Box and Whisker Plots

Try these problems using a graphing calculator. Find the measures of central tendency and variance for each problem, then create a box and whisker plot. You will need to record your responses on a separate sheet of paper or on the back.

1. Number of homeruns for each Oriole player (with 130 at bats or more) in 1999.

Cal Ripken	18	B.J. Surhoff	28	Will Clark	10
Albert Belle	37	Jeff Conine	13	Brady Anderson	24
Rich Amarall	0	Mike Bordick	10	Jerry Hairston	4
Delino Deshields	6	Charles Johnson	16	Jeff Rebolet	0

2. Coldest ever (on record) temperature for each month for Baltimore, MD.

Jan	¯7°F	Feb	¯3°F	Mar	6°F	Apr	20°F	May	32°F	June	40°F
July	50°F	Aug	45°F	Sept	35°F	Oct	25°F	Nov	13°F	Dec	0°F

3. Amount of rainfall for Honolulu, Hawaii each month in 1999.

Jan	3.4	Feb	2.6	Mar	2.8	Apr	1.3	May	1.0	June	0.4
July	0.6	Aug	0.6	Sept	0.7	Oct	2.0	Nov	2.6	Dec	3.5

4. All-Time Box Office Grosses (as of June 1999)

Titanic (1997)	600,788,188	Star Wars (1977)	460,998,007
E.T. (1982)	399,804,539	Jurassic Park (1993)	357,067,947
Forrest Gump (1994)	329,690,974	The Lion King (1994)	312,855,561
Return of the Jedi (1983)	309,161,884	Independence Day (1996)	306,169,255
The Empire Strikes Back (1980)	290,268,568	Home Alone (1990)	285,016,000

5. Age of each president at Inauguration

President	Age	**President**	Age	**President**	Age
Washington	57	Buchanan	65	Harding	55
J. Adams	61	Lincoln	52	Coolidge	51
Jefferson	57	A. Johnson	56	Hoover	54
Madison	57	Grant	46	F. D. Roosevelt	51
Monroe	58	Hayes	54	Truman	60
J. Q. Adams	57	Garfield	49	Eisenhower	62
Jackson	61	Arthur	50	Kennedy	43
Van Buren	54	Cleveland	47	L. B. Johnson	55
W. H. Harrison	68	B. Harrison	55	Nixon	56
Tyler	51	Cleveland	55	Ford	61
Polk	49	McKinley	54	Carter	52
Taylor	64	T. Roosevelt	42	Reagan	69
Fillmore	50	Taft	51	Bush	64
Pierce	48	Wilson	56	Clinton	46

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Use Extremes, quartiles and median to check box and whisker plots. Outliers, if any, are listed below. You may choose not to introduce outliers here.

1.

Mean	13.8333…	Median	11.5	Mode	0 and 10
Lower Extreme	0	Upper Extreme	37	Range	37
Lower Quartile	5	Upper Quartile	21	Interquartile Range	16

Outlier: None

2.

Mean	21.333…	Median	22.5	Mode	none
Lower Extreme	-7	Upper Extreme	50	Range	57
Lower Quartile	3	Upper Quartile	37.5	Interquartile Range	34.5

Outlier: None

3.

Mean	1.791666…	Median	1.65	Mode	.6 and 2.6
Lower Extreme	0.4	Upper Extreme	3.5	Range	3.1
Lower Quartile	0.65	Upper Quartile	2.7	Interquartile Range	2.05

Outlier: None

4.

Mean	365182092.3	Median	321273268	Mode	None
Lower Extreme	285016000	Upper Extreme	600788188	Range	315772188
Lower Quartile	306169255	Upper Quartile	399804539	Interquartile Range	93635284

Outlier: 600,788,188

5.

Mean	54.8333…	Median	55	Mode	51, 54, 55, & 57
Lower Extreme	42	Upper Extreme	69	Range	27
Lower Quartile	51	Upper Quartile	58	Interquartile Range	7

Outlier: 69