

FST: Pre Quiz 1.4 – 1.6
SHOW YOUR WORK!

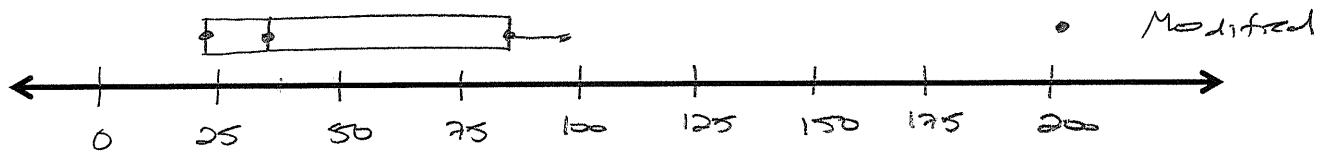
Name _____

In #1-4, use the following data for the salaries in thousands of the nine employees of Execo.
 $\{200, 98, 69, 48, 34, 24, 24, 24, 24\}$

- 1) Give the five number-summary for Execo salaries.

$$\text{Min} = 24 \quad Q_1 = 24 \quad M=1 = 34 \quad Q_3 = 83.5 \quad \text{Max} = 200$$

- 2) Draw a box plot of the data.



- 3) Does the set contain any outliers under the $1.5 \times \text{IQR}$ criterion? If so, name them. If not explain why not.

$$\text{IQR} = Q_3 - Q_1 = 83.5 - 24 = 59.5$$

$$24 - 1.5(59.5) = -65.25$$

$$83.5 + 1.5(59.5) = 172.75$$

Yes, outlier is 200, or \$200,000

- 4) Find the variance and the standard deviation of the data. ROUND TO HUNDREDTHS.

x_i	$x_i - \bar{x}$	$(x_i - \bar{x})^2$
200	139.44	19443.57
98	37.44	1401.75
69	8.44	71.23
48	-12.56	157.75
34	-26.56	705.43
24	-36.56	1336.43
24	-36.56	1336.43
24	-36.56	1336.43
SUM	-64	27126.19

$$\bar{x} = \frac{545}{9} = 60.56$$

* NOT EXACTLY
ZERO DUE TO
ROUNDING.

$$\text{VARIANCE} = \frac{3390.77}{9-1} = 27126.19$$

$$\sqrt{\frac{27126.19}{8}} = 58.23$$

$$\text{STANDARD DEVIATION} = \sqrt{3390.77} = 58.23$$

$$\sqrt{3390.77} = 58.23$$

In #5-7, Use the table below on seasonally adjusted U.S. domestic imports for 2007.

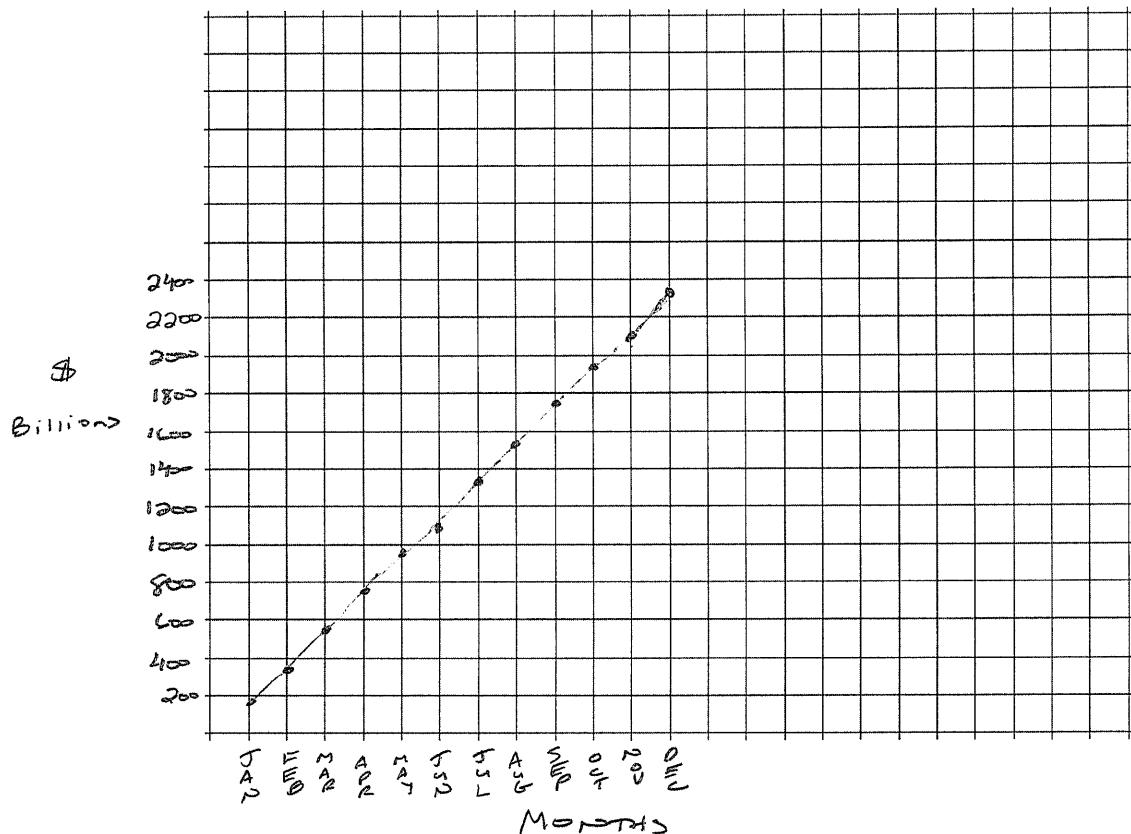
U.S. Total Imports In Goods and Services (\$ billions)

TOTAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Total (per month)	187	186	192	191	193	195	197	197	198	200	205	203
Cumulative Total	?	?	?	?	?	?	?	?	?	?	?	?
Source: U.S. Census Bureau	187	373	565	752	949	1144	1341	1538	1736	1934	2141	2344
								8th				

5) Compute the cumulative total imports for the last twelve months.

6) Draw a **cumulative line graph** for imports.

U.S. Cumulative Total Imports



7) What percent of the total cost of U.S. domestic imports occurred by the end of the eighth month?

$$1538 / 2344 = \boxed{65.6\%}$$