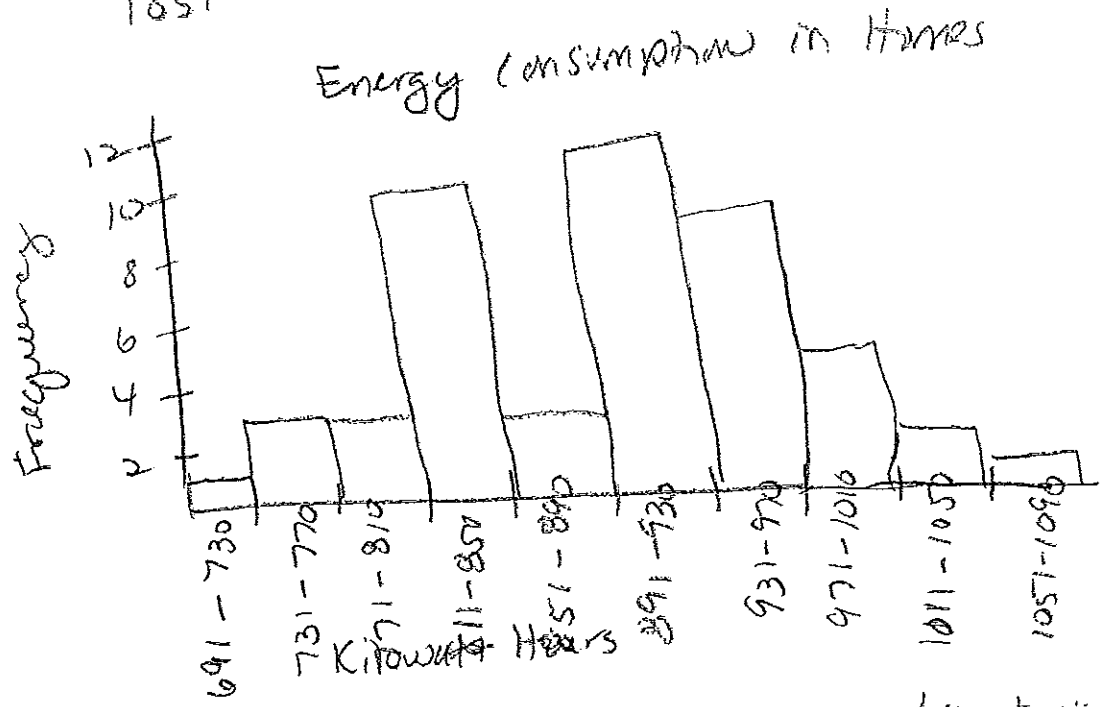
AP Stat Review for unit I Test
Topics 1-5

(1) homes
(2) quantitative, # of kilowatt hours
(3)

Class	Tally	Frequency
691 - 730	I	1
731 - 770	III	3
771 - 810	III	3
811 - 850	~~IIII~~ ~~IIII~~	10
851 - 890	III	3
891 - 930	~~IIII~~ ~~IIII~~ I	11
931 - 970	~~IIII~~ IIII	9
971 - 1010	~~IIII~~	5
1011 - 1050	II	2
1051 - 1090	I	1

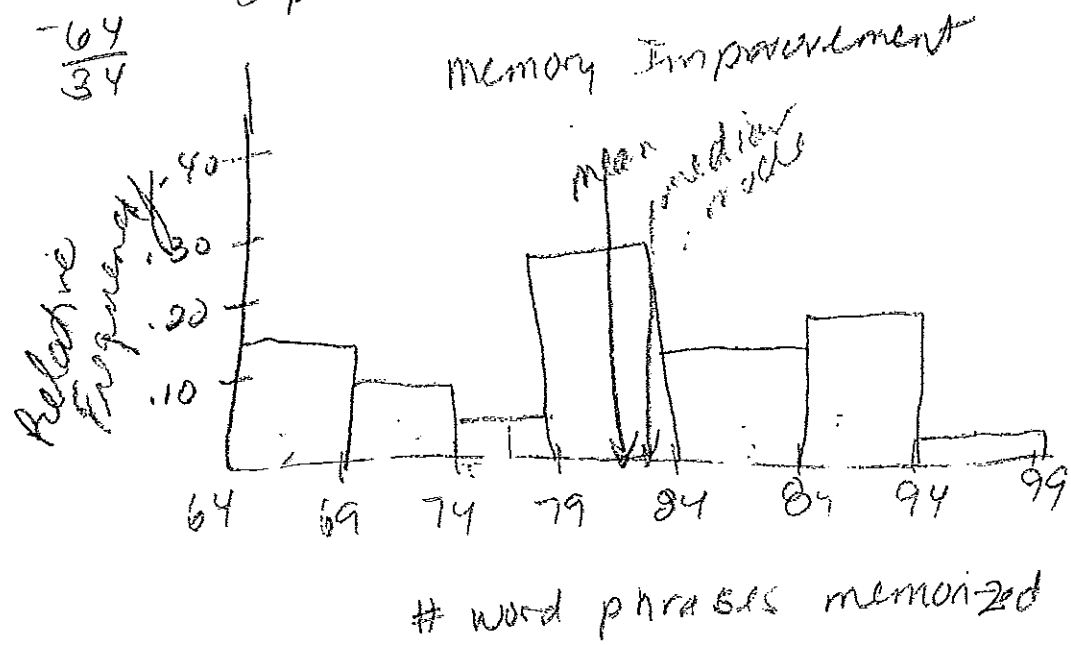
(4)



(5) The distribution of kilowatt hours has two distinct peaks - one in the 811 - 850 range and another in the 891 - 970 kilowatt hour range. Other than the gap in the middle, the data is mound-shaped. The center is about 870

Kilowatt hours. The energy consumption ranges from 691 to 1089 and there appear to be no outliers.

(6) $98 - 64 = 34$ 5 per class



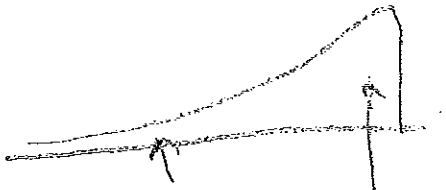
(7) $\bar{x} = 81.15$
median = 83
mode = 83

yes, most of the data is on the center with an equal number of observations on either side of the tallest bar

(8) mode remains same, median could be lowered slight. mean is most affected by drastic changes and outliers. (NEW mean = 77.55)

(9) no, need to take into account # of students in each class and determine a weighted mean

(10) Skewed left, median time is higher



few finish quickly

most take entire time or close to entire time

(11) for mound-shaped, symmetric distributions

68% of the data is within 1 std. dev. of $\bar{x}$

95% " " " " " 2 " " " "

almost 100% " " " " " 3 " " " "

can't use it on the distribution in #10, because it is skewed

(12) medical records of male coronary patients

(13) $\bar{x} = 54.6$ $s^2 = 94.67$ $s = 9.73$

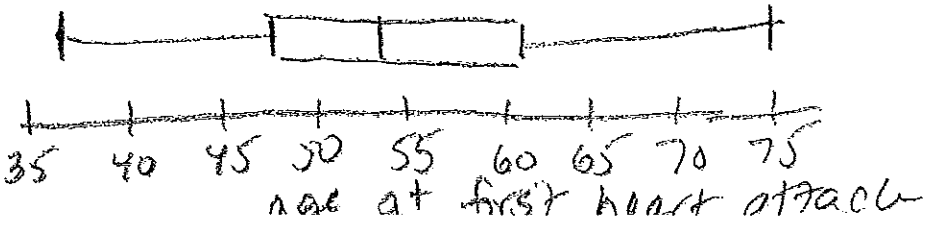
(14) 68% values between 45 and 64

$\bar{x} + s = 64.33$

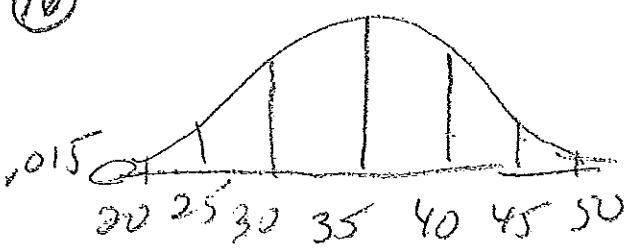
$\bar{x} - s = 44.87$

$\frac{19}{30} = 63\%$ → close to 68%

(15)



(16)



$P(x < 20)$

past 3 standard deviations below the mean – very unlikely

would suspect claim is not correct – occurs less than .0015 or .15% of time

(17)

me

$z = \frac{66-75}{15} = -.6$

friend

$z = \frac{223-250}{25} = -1.08$

I am better. Both values are less than mean, my score is closer to the mean in terms of standard deviations.