

PC Quiz 1.1-1.3 Review

Name _____

1) Consider the following list: $\overset{1}{34}, \overset{2}{26}, \overset{3}{7}, \overset{4}{19}, \overset{5}{23}, \overset{6}{98}, \overset{7}{33}, \overset{8}{14}, \overset{9}{76}, \overset{10}{33}, \overset{11}{12}$. Let x_i be the i th element in the list. Evaluate.

a) $\sum_{i=1}^6 x_i$
 $34 + 26 + 7 + 19 + 23 + 98 = 207$

b) $\sum_{i=3}^9 x_i$
 $7 + 19 + 23 + 98 + 33 + 14 + 76 = 270$

c) $\frac{1}{11} \sum_{i=1}^{11} x_i = \frac{375}{11} = 34.1$

2) In Chemistry, Labs are worth 30%, Quizzes are worth 25%, Tests are worth 35% and the Final Exam is worth 10%. Ben and Kate earned the following scores in each graded category. Who received the higher overall course grade?

	Ben	Kate
30%	93	79
25%	88	95
35%	75	89
10%	91	90

Ben
 $.3(93) + .25(88) + .35(75) + .1(91) = 85.25\%$

Kate **HIGHER OVERALL**
 $.3(79) + .25(95) + .35(89) + .1(90) = 87.6\%$

3) Use the data in the table below to answer the questions below.

Grade Level	Amount of Homework				Total
	None	1 Hour	2-3 Hours	4+ Hours	
Freshman	28	89	75	113	305
Sophomore	35	120	88	172	415
Junior	40	155	102	91	388
Senior	52	213	75	20	360
Total	155	577	340	396	1468

a) What percent of sophomores have less than 2 hours of homework each night?

$\frac{35 + 120}{415} = 37.3\%$

b) What percent of students who have no homework are freshmen?

$\frac{28}{155} = 18.1\%$

4) The chart below gives information about the number of pets students in the BHS Book Club have at their homes. Use the information in the chart to answer the questions below.

Number of Students	Number of Pets
5	0
4	1
4	2
3	3
2	4
2	5
1	15

21

a) How many students are in the Book Club?

21

b) Find the mean number of pets.

$$\frac{(5)(0) + 4(1) + 4(2) + 3(3) + 2(4) + 2(5) + (1)(15)}{21}$$

$$= \frac{54}{21} = 2.6 \approx 3 \text{ pets}$$

c) Find the median number of pets.

$$\frac{21}{2} = 10.5 \rightarrow 11^{\text{th}} \text{ Student}$$

2 pets

d) Which number, the mean or the median, best describes the typical number of pets for a book club member? Explain.

Median - mean is too high due to the student with 15 pets; only 8 of the 21 students have 3 or more pets.

5) The table below shows data regarding accidental deaths in the U.S. in 2004.

Age	Drownings
Under 1 yr	62
1-4	430
5-14	269
15-24	574
25-34	385
35-44	435
Above 44	525

2680

a) What is the median age of a victim who died of an accidental death by drowning?

$$\frac{2680}{2} = 1340 / 1341$$

25-34 yrs

b) What percent of accidental death by drowning victims were older than 34?

$$\frac{435 + 525}{2680} = 35.8\%$$

c) Indicate two problems you would have if you were to make a histogram with the data in the table.

- Age intervals (bin widths) are not all the same
- Above 44 is vague