

EM40S Hand-In Assignment - Statistics**Mark****34**

- Show your work for full marks!!!

1) Sara paid the following amounts for her last six pairs of jeans before tax:

\$44, \$38, \$45, \$, 125, \$50, \$49

a) Determine the mean.

(1)

b) Determine the median.

(1)

c) Determine the mode.

(1)

d) Which measure of central tendency best describes the data? Why?

2) Use the table below to answer the following:

Favourite Hockey Player	Number of Votes
Sidney Crosby	8
Jarome Iginla	5
Alexander Ovechkin	8
Ryan Smyth	-

a) Which measure of central tendency best represents the following data?

(1)

b) What is the value of the measure you chose in part a?

(1)

- 3) Bug-B-Gone has developed a new disinfectant to kill germs. Ten tests were performed with the following results.

Percent of germs eliminated:

67, 99, 91, 87, 99, 70, 99, 69, 92, 61

a) Determine the mean.

1)

b) Determine the median.

1)

c) Determine the mode.

1)

d) If you were the owner of the company, which measure of central tendency would you use for advertising? Explain why.

2)

e) If you were working for the Centre for Disease Control, which measure of central tendency would be best for the public to use in evaluating the product? Explain why.

2)

4) The ticket prices for a concert series were:

\$12, \$37, \$45, \$18, \$8, \$25, and \$18

What was the ticket price of the 8th (and final) concert in this series if the set of 8 prices had a mean of \$23, a mode of \$18, a median of \$19.50, and a range of \$37?

(2)

5) Last year a small accounting firm paid each of its five clerks \$22 000, two junior accountants \$50 000 each, and the firm's owner \$270 000.

a) What is the mean salary paid at this firm?

(1)

b) What is the median salary?

(1)

c) Write a sentence to describe how an unethical recruiter could use statistics to mislead prospective employees.

(1)

6) Determine the weighted mean for the following data:

Category	Score (%)	Weight (%)
Homework	60	5
Midterm	75	35
Project	80	20
Speech	70	15
Final Exam	62	25

2)

7) A student receives the following grades:

- A in Science
- A in Math
- B in History
- D in Phys-Ed
- C in Metals

Grade	Points
A	4
B	3
C	2
D	1

Using the grade point values, determine the student's mean grade point score.

2)

8) A statistics class of 20 students takes the final exam. The scores were as follows:

88 84 77 82 85 86 85 83 81 85
87 82 85 11 84 98 94 0 83 87

a) Determine the mean.

(1)

b) Determine the median.

(1)

c) Determine the mode.

(1)

d) Identify any scores which may be considered outliers.

(1)

e) Remove any outliers and calculate the new mean.

(1)

f) How does it compare to the original mean (from a)?

(1)

g) Determine the trimmed mean.

2)

h) How does the trimmed mean compare to the original mean (from a)?

1)

i) Consider your values for the mean (part a), recalculated mean (part e), and trimmed mean (part g). Which statistic is a better indicator of how the majority of students performed on the exam? Explain why.

2)