

# Essential Math 40S

## Statistics Hand-In Assignment 2

Name \_\_\_\_\_

1. On this unit you have an average mark of 70% for your assignments and a 90% mark on your test.

a) If assignments and tests are weighted equally, find your mean mark for this unit.

b) Determine your weighted mean mark for this unit if assignments have a weight of 10% and tests have a weight of 70%.

2. In a recent survey, people recorded how many cats each household in a neighbourhood contained. They generated the following data:

# of Cats	# of Households (Frequency)
0	23
1	42
2	11

Use a weighted mean to calculate the mean number of cats per household in this neighbourhood.

3. At the end of her English course, Samira had the following results:

	<b>Marks</b>	<b>%</b>	<b>Weight</b>
<b>Essays</b>	75/90		50%
<b>Reading Comprehension</b>	60/110		20%
<b>Final Exam</b>	20/45		30%

- a) Complete the percentage (%) column in the table above, showing percentage scores for each of the three graded areas.
- b) Calculate Samira's final mark using a weighted mean.

4. One year on a farm there were 310 calves born. One of the calves weighed 90 lbs at birth. This calf weighed more than 235 of the other calves born that year, and the same as 17 calves. Calculate the percentile rank for this calf's birth weight.

5. You received a mark of 94% on this assignment. (Nice!) You discover that your percentile rank is  $P_{22}$ . State what the percentile rank tells you about your performance compared to the rest of the class.

6. A group of kids calculated the volume of candy they received on Halloween. The results were as follows (in L):

1	2	2	2	3	4	5	5	5	5
6	6	7	8	8	8	8	8	9	10

a) Calculate the percentile rank for a volume of 8L.

b) Calculate the percentile rank for a volume of 3L.

7. The table below shows the average number of hours 8 different children spend playing video games each week.

Name	Average # of Hours Playing Video Games in a Week
Lynna	0
Candelaria	0.6
Shizuko	1.2
Marcelo	2.4
Cathrine	3
Doria	5.2
Dominic	5.5
Marguerite	8.9

Calculate Doria's percentile rank for the time she spends playing video games in a week.

8. 32 people wrote the test on statistics. When you get your test back, you discover that only 2 people did better than you, and one other person scored the same as you. Calculate your percentile rank.

9. Marc must write an entrance exam to enter university. He must receive a minimum grade of 75% on the entrance exam to be accepted into university.

Last year his mark was in the 70<sup>th</sup> percentile. He was not accepted. This year his mark is in the 80<sup>th</sup> percentile.

Justify why it cannot be determined if Marc will be accepted into university this year.