GRADE 12 ESSENTIAL
WEEKLY QUIZ 2020-04-29

Name:_____
Date: _____

INSTRUCTIONS

Open book, but hopefully you also have a cheat sheet started.
Show work where appropriate for best mark and to better organize your thoughts. '**State**' means give an answer (all that is necessary), '**Determine**' or '**Calculate**' suggests you show your work, a plain answer is not sufficient. **Explain** means use a proper sentence.
Round decimal answers to nearest 0.01 unless otherwise indicated
Each individual question is worth 2 marks. Formulae and tables have been provided in notes, tables, supplemental sheets.
Show work on separate paper if necessary.

1.   Find the sample size, n, the sum of the data, $\sum x$, the mean, $\bar{x}$, the median, $\tilde{x}$, the Mode, and the Range of the given sets of data.

    a.   {3, 4, 9, 7, 2, 7} The ages in years of your nephews and
    nieces

State n =   _____   **State** $\sum x =$ _____ **State** Mode (s): _____

Determine $\bar{x}$ = _____; Determine $\tilde{x}$ = _____
Determine Range: _____

Determine means show WORK!

    b.   {32, 2, 2, 2, 2, 2, 4, 4, 4, 4, 5, 5, 6, 4, 2, 18}   The ages (years) of
    people in a day care as they come in the door.

State n =   _____   State $\sum x =$ _____   State Mode(s): _____

Determine $\bar{x}$ = _____; Determine $\tilde{x}$ = _____
Determine Range: _____

2. **Problem Solve:** "*Double the teachers age and add 5 and the result is 115*". **Determine** how old the teacher is [show your method, lots of possible methods]

3. If your car is originally worth $34,600 (the worth of a car does not include taxes that the government(s) collect) and it depreciates at 20% per year, **determine** the expected value of your car:

   a. after one year; and

   b. after five years.

4. **Describe** 2 advantages of leasing a car rather than financing the purchase of a similar new car. [proper sentences]

5. Silas wants to buy a new truck worth $28,500. The dealership offers him a trade-in value of $4,200 for his used car.

    a. **Calculate** the purchase price of the new truck after taxes. (GST:5%; PST:7%)

    b. **State** one way to decrease the total amount paid to finance (ie: the interest) the car Silas decided to buy.

6. **Problem Solve**. A girl has 10 L of pop for a picnic. She has 14 bottles; some are 500 ml bottles and some are 2 L bottles. **Determine** how many 500 ml bottles she has.

7. The fuel economy of Carla's vehicle is 9.5 L/100 km. She is planning to drive her vehicle from Winnipeg to Toronto, a distance of 2230 kilometres.

    a. Determine the total amount of fuel in litres required for the trip.

    b. Determine the cost of fuel for the trip if the fuel price is $1.065/L. [gas prices as posted at the pump always include all taxes [since there are many])

8. Alicia is purchasing a new vehicle for $29,000, after taxes (ie: taxes included). She is financing the vehicle for 7% Annual Percentage Rate over 5 years.

    a. Determine Alicia's monthly vehicle payment [use the loan tables provided; check it with a bank website or loan app on your device if you want]

    b. Determine the total amount of interest she will pay over the 5 years to finance her car.

    c. **Bonus**. Determine her monthly payment for the 5 year loan at 7.75% Annual Percentage Rate.

9. Doug works as a sales clerk at Cycle Sports. During the first 12 days of the month, the store sold the following numbers of bikes:

16	32	27	19
19	23	19	32
25	20	35	33

Calculate the median, mean, and the mode of this data.

    a. Median: _____ bikes

    b. Mean: _____ bikes

    c. Mode: _____ bikes

10. Dave has just finished writing a statistics test. There are 45 students in his class and 35 students scored less than Dave. Calculate Dave's percentile rank. **Extra mark** for showing it in some type of diagram.
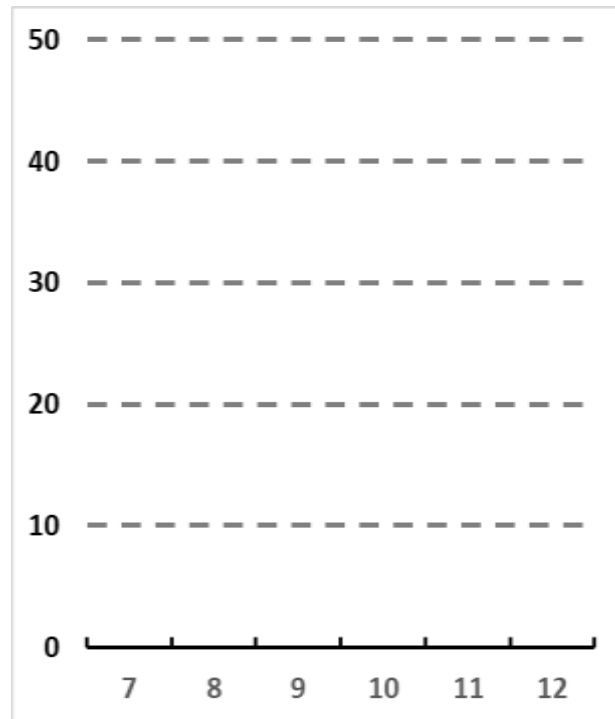
Bonus. Megan is taking a Psychology class at university. The table below shows her marks and their corresponding weights.

Category	Average Mark (%)	Weight (%)
Projects	75	10
Assignments	85	30
Tests	73	40
Exam	?	20

Calculate the mark Megan needs on her final exam to receive a final course mark of 80%.

Bonus. A store sells shoes with sizes ranging from 7 to 12. The following table shows sales for the last month.

Size	Quantity Sold
7	5
8	20
9	25
10	43
11	5
12	2

Graph and Label a proper histogram

State the mean, median, mode, and range of the data below.

State:

Mean: _____ ; Median: _____

Mode: _____ ; Range: _____