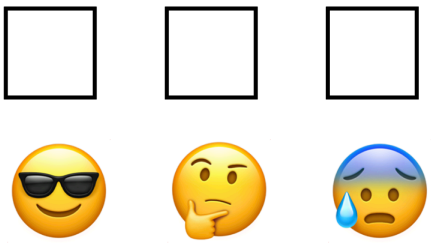
Homework 2

Instructions

(1) Print out this form and record your answers directly in the space provided.
(2) For problems requiring additional written work, use the allotted work space.
(3) Once you're done with a problem, reflect on how you well-equipped you felt answering that particular problem using the confidence level assessment shown below.

Confidence-level assessment



Confident

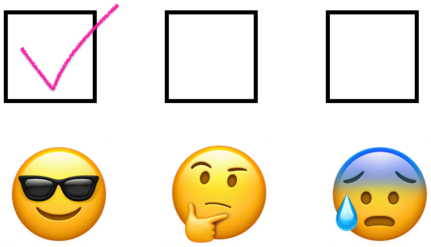


Figure 1: I knew the answer to that question

Unsure

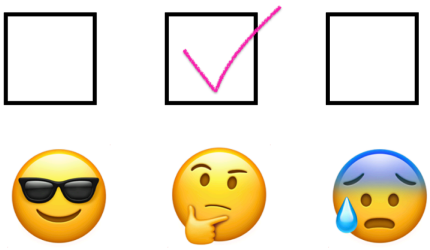


Figure 2: I'm not sure whether I got this question correct

Don't Know

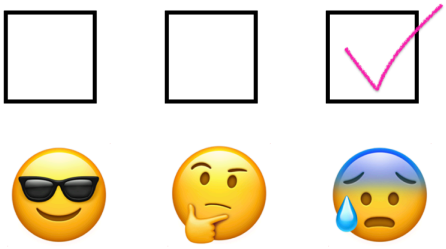


Figure 3: I don't know the answer for this question

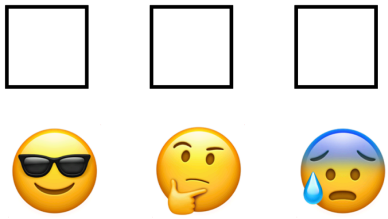
(4) Scan (or take pictures of) your completed homework and upload it to the course Canvas site

Questions

Question 1

The following table provides chart data for the patients in a particular hospital ward:

Patient	Room	Physician	Condition	Length of stay
Carter, M.	202	Pollock	Critical	8 days
Levin, J.	203	McClare	Fair	4 days
Fox, J.	203	Lench	Good	5 days
Garcia, L.	205	Lench	Fair	7 days
Arluke, A.	201	Pollock	Serious	2 days
Parodi, A.	203	McClare	Good	9 days



Patient	Room	Physician	Condition	Length of stay
Stark, D.	204	Lench	Fair	5 days
Chow, F.	202	Pollock	Critical	1 day
McDevitt, J.	204	Loftus	Serious	2 days

Name and calculate the most appropriate measure of central tendency and variability for each of the following variables. Feel free to provide a justification for your choice of measure as you see fit.

Room number Physician Patient condition Length of hospital stay

Measure of central tendency: _____
Measure of variability: _____
Measure of central tendency: _____
Measure of variability: _____
Measure of central tendency: _____
Measure of variability: _____
Measure of central tendency: _____
Measure of variability: _____

Question 2

A researcher collected information on the number of text messages sent over an 8-hour period by a group of teenagers and a group of parents. The data collected are as follows:

Table 2: TEENAGERS

Case #	Number of Texts
1	4
2	27
3	10
4	8
5	5
6	4
7	11
8	7
9	9
10	5

Table 3: PARENTS

Case #	Number of Texts
1	0
2	6
3	5
4	2
5	9
6	10
7	7
8	9
9	6

a. Find the mode, median, mean, range, and standard deviation for the number of texts sent by each group (teenagers and parents).

Work space:

TEENAGERS MEAN _____ MEDIAN _____
MODE _____ RANGE _____
STANDARD DEVIATION _____

PARENTS MEAN _____ MEDIAN _____
MODE _____ RANGE _____
STANDARD DEVIATION _____

b. Which group – teenagers or parents – tended to send more texts? Support your answer using statistics you calculated for Part a. [Choose the most useful statistics for making your case].

Answer:

c. Which group – teenagers or parents – had the greatest diversity in the number of texts sent? Support your answer using statistics you calculated for Part a. [Choose the most useful statistics for making your case].

Answer:

d. What do your calculations indicate about the shape (symmetrical, negatively/left skewed, or positively/right skewed) of the distributions for the two groups?

Answer:

e. If you removed the most extreme case (the person with the most text messages) from each of the distributions, would your answers to Parts b and c change?

Answer:

Question 3

A teacher asked a sample of 18 junior high school students how many hours of television they watched during the previous weekend. The results of the survey are summarized in the following frequency distribution.

Hours of TV	Frequency
5	3
4	5
3	6
2	2
1	2
0	0

Work space:

Calculate the following statistics to describe these data:

MEAN _____ MEDIAN _____
MODE _____ RANGE _____
STANDARD DEVIATION _____