AP STATISTICS
PROBLEM SET #1

DUE DATE: AUGUST 23, 2023; 5:00 PM

Question 1. Do the **Quiz: Problem Set 1** on `https://apclassroom.collegeboard.org/` and finish the 15 MCQ.

Send me an email if you did not receive the AP Classroom link and join code.

Question 2. For each of the following, (1) identify the random variable, (2) give the range of possible values for the random variable, and (3) indicate whether the variable is discrete or continuous.

(a) To measure the rainfall over a 24 hour period in Seattle, where the height of water collected in a rain gauge (up to 200 mm) is used.

(b) To investigate the stopping distance for different cars whose initial velocity is 60 km/hr.

(c) To check the reliability of a new type of light switch, where the switches are turned `On`/`Off` repeatedly until they fail.

Question 3. Draw illustrations for the following sets:

(a) $A \cup B \cup C$
(b) $A \cap B \cap C$
(c) $(A \cup B) \cap C$
(d) $A \cup (B \cap C)$
(e) $(A^c \cap B) \cup (B^c \cap C)$

Hint: to deal with (c) and (d), follow the PEMDAS rule where you do parantheses first.