

Homework Solutions (Due date Feb. 7)

Assigned exercises: From Chapter 1 in Introductory statistics:
42, 44, 45, 58, 59, 63, 64, 66.

Graded exercises circled:

Grade distribution: 3 points for each of 5 graded exercises, plus 5 points for completing the rest. Deduct 1.5 points for each missing problem, unless it is one of the graded problems. If a graded problem is missing, student loses the 3 points allotted to it, and nothing more. Maximum points possible = 20

Exercise 44:

- (a) Population = All clients who use the fitness center
- (b) Sample = Not clearly described, but presumably some subset of clients who use the fitness center
- (c) Parameter = The true mean amount of time that all clients exercise per week.
- (d) Statistic = the mean amount of exercise time of the sample of clients.
- (e) and (f) are not graded.

Grade: (a) and (c) = 1 point; (b) and (d) = 0.5 point each

Exercise 45:

- (a) Population = All clients of the insurance company
- (b) Sample = Not indicated, but presumably some subset of clients
- (c) Parameter = The true mean annual health costs of all their clients
- (d) Statistic = The mean annual health costs of their sample
- (e) and (f) not graded.

Grade: Similar distribution as previous exercise

Exercise 58:

Type of data = Categorical OR qualitative

Example of data = Star Trek OR Sex and the City

Grade: 2 pt. for correct type; 1 pt for valid example

Exercise 64

The correct answer is (c): quantitative continuous.

Grade: 3 points for correct answer; if answer is given as (b), the student gets 1 point partial credit

Exercise 66

Correct answers to this question will vary. But, full credit requires being clear about ① what your population is, ② how you will pick a sample from this (sampling method), and ③ what role randomization will play.

Here is an example of a solution:

My population is all the colleges in my state that offer statistics classes. I will pick a sample of 30 colleges from this population by random selection, using a random number generator. I will compute the mean number of students in all the statistics classes in my sample.

Grade: 1 point each for addressing the 3 specific items listed above in a valid way.