

ECON 3640–001: Probability & Statistical Inference

Problem Set 1

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Instructions: Moving average problem.

Problem 1

With your own words, define and give an example of each of the following statistical terms.

- (a) Population;
- (b) Sample;
- (c) Parameter;
- (d) Statistic.

Problem 2

A student received the following letter grades on the 14 quizzes she took during a semester: A, A-, B+, A-, A, C, A, A, A-, B, B+, C, A, and A.

- (a) What is the *type* of these data? Explain.
- (b) Use your best judgment to *illustrate* these data.

Problem 3

A sample of 12 people was asked how much change they had in their pockets and wallets. The responses (in cents) were:

52 25 15 0 104 44 60 30 33 81 40 5

- (a) Determine the *mean*, *median* and *mode* for these data. Show your calculations.
- (b) Determine the first, second, and third *quartiles* of these data.
- (c) Compute the *variance* and *standard deviation* for these data. Show your calculations.
- (d) Draw a *box plot* for these data.

Problem 4