

Logic & Coding
Mr. Redmond
Unit 5 Pretest

Name:

Score: /29

The test key is in a Java file: [UnitFivePreTestKey.java](#)

The entirety of the Chapter 5 test will be done in Java. The code shell should be copied and moved into a new Java file.

Solutions to this should be written into the .java file using comments and must be clearly labeled.

1. Mr. Redmond has a data set that must be analyzed - it contains the values 2, 4, 6, 8, 10, 12, 14, 20, and 16 (12 pts).

a. Make an array containing the values given above, in the order they were given (3 pts).

b. Find the range, variance, and standard deviation of the array. You may need to look these formulas up in order to program them, but **you must have the computer calculate these for credit**; performing the calculations by hand may only be done to verify solutions (9 points, 3 each).

*NB: on the exam, 1b will be a 12-point question with 4 subparts.

There will be a bonus question.

2. Mr. Redmond is plotting to overthrow the government of a country called “Arstotzka” but wants to change the name of his dominion. Tasks 2b through 2d below **must be solved by using String methods**; you cannot merely retype the String (17 points).

- a. Make a String variable containing the value given above (2 pts).
- b. How long is the name (1 pt)? Using concatenation, modify the String to start with “Glory to “ and end with the original value (4 pts). How long is it now (1 pt)?
- c. Using the `contains()` method, determine if your String contains “Papers”. Please display the result of this check (3 pts).
- d. Using calls to the `replace()` method remove all spaces in the String, make the “t” in “to” capital, and swap “Arstotzka” with “Oceania”. You should have “GloryToOceania” (6 pts).

*NB: on the exam, 2b will have a 3-point question and 2c will be 4 points.

*Fun fact: the line “Glory to Oceania” never appears in *1984*.