

BE.104 Spring
Concepts in Variance or "Oh, What a Fuzzy World We Live In"
Classroom exercise
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Making Variance

Exercise 1- The length of desks versus the length of forearms

A. Desks (*2 students*)

- 1) Use a 12-inch ruler to measure the length of the shorter side of every desk in the classroom.
- 2) Record the measurements

B. Forearms (*2 students*)

- 1) Use a 12-inch ruler to measure the lengths of all forearms in the room
- 2) Record the measurements

Exercise 2- Pitching pennies

A. Line (≥ 3 *students*)

- 1) Stand at least 15 feet from a chalk line drawn longitudinally on the floor in the classroom.
- 2) Pitch pennies at the chalk line on the floor with the aim of getting them to land as close as possible to the line.
- 3) Record all distances of pitched pennies from the line with a 12-inch ruler.
- 4) Record as many distances as humanly possible in the time allotted.

B. Wall (≥ 3 *students*)

- 1) Stand at least 15-feet from a wall in the classroom.
- 2) Pitch pennies at the wall with the aim of getting them to land as close as possible to the wall.
- 3) Record all distances of pitched pennies from the wall with a 12-inch ruler.
- 4) Record as many distances as humanly possible in the time allotted.

Exercise 3- Random Sampling

(4 students; 2 per flask)

- 1) Each student should take a foiled flask of beads. Do not peek inside! ;-)
- 2) Withdraw 5 beads.
- 3) Record the number of black beads drawn, including "0," if none are observed.
- 4) Put the drawn beads back in the flask, close, shake, and draw another 5 beads.
- 5) Repeat the drawing/recording as many times as humanly possible in the time allotted.