

## Colorado Springs Simulation Lab

You are a manager for Jones Bros. Trucking located in Penrose, Colorado and have won a contract to truck bulk cement from Holcim in Penrose, Co to a large cement (redi-mix) plant in Monument, CO just north of Colorado Springs (COS).



Your boss has directed you analyze the trucking time for loaded trucks from Penrose to the Monument redi-mix plant. You know the following information about the trip driving times which consist of 2 Parts:

Part 1 - driving times from Penrose up to COS are triangularly distributed (symmetrically) from 45 to 75 minutes.

Part 2 -driving times through COS to Monument are normally distributed with a mean of 55 minutes and an SD of 25.5 minutes.

You decide the best way to analyze this data is to SIMULATE the entire driving time from Penrose to Monument using MS Excel and your knowledge of simulation.

Provide your boss the following information in a **quality word processed document** with ALL necessary supporting documentation:

(20 points) The histogram of the driving times from Penrose to Monument (use bins of 10 minutes or less).

(20 points) The descriptive statistics of a simulated trips

The probabilities for the following:

- a trip will take less than 100 minutes (20 points)
- a trip will take between 97 and 125 minutes (20 points)
- a trip will take more than 120 minutes (20 points)

**Submit your report as an e-mail attachment to: mheinen\_1@msn.com**

**This report is NLT FRIDAY December 14, 2018**