

BUNGEE BARBIE

Your team has just been hired to work for the Acme Daredevil Entertainment Company. This company, in order to keep up with today's market, has decided to add Bungee Jumping to their list of other services. As part of the first assignment, the board has decided that the teams will undertake the task of working out the details of this new venture in order to prove their worth to the company.

The task is to determine the ultimate, maximum length of bungee cord that can be used and not cause any type of injury to any one jumping at any given height.

SUPPLIES: Barbie Doll, Rubber Bands, Graph Paper, Measuring Devices, and Calculators.

PROCEDURE: Collect data by measuring the length of Barbie's fall with one rubber band and so on until your group has decided they have enough data. (Do at least 1-10) You may want to do several jumps and average your answers. Your team will need to develop the linear equation of your data and include a graph of this data. Your teams solution should include:

1. Linear Equation
2. Include graphs and data tables.
3. List any assumptions that were made.
4. Include possible sources of error.

Each team will need to be able to predict the length of Bungee cord (number of rubber bands) needed, for a mystery test height. The team that comes nearest to the ground without hitting will receive 30 bonus points (10 points per member).

EVALUATION: Each team member will turn in a written report which should include:

PAGE 1: Title page; Title, Date, Names.

PAGE 2: Lab page; "Problem", "Procedure", "Assumptions", "Possible Errors" "Prediction", and "Reflection".

PAGE 3: Graph and Data Table; This should include your linear equation in slope/intercept form.