Statistics on Student Heights

Objective:

Students will collect data and use a spreadsheet to perform statistical analysis on the data. They will also create charts to represent the results.

Materials required:

Spreadsheet software

Measuring device ie. Tape measure

Pens or pencils

Procedure:

1. Students will perform a statistical analysis of height measurements of students in their class.
2. Record the height of each student in class. Measure in feet and inches, and measure to the closest .25 inch.
3. Start a new spreadsheet and label cell A1 Student Height Statistics. Label cell A2 with your name, and label cell A3 Student Height. Label cell A4 “feet”, cell B4 “inches”, and cell C4 “decimal feet”.
4. Input the raw data for student height in feet and inches below the corresponding labels. Do not enter anything for decimal feet yet.
5. Write a formula for calculating decimal feet in the cell below “decimal feet”. Copy this formula to all of the data rows. Format the numbers in the decimal feet column to show two decimals. Note: the formula will add the “feet” cell plus the “inches” cell divided by 12. Feet+(inches/12)
6. At the bottom of the column for decimal feet, input a formula to calculate the sum of the decimal feet data.
7. Use the decimal feet data to calculate the Mean, Median, Mode, and Range of your data. Place these entries in the columns to the right of your decimal feet data. Label the cell with Mean, then in the cell next to it, place a formula to calculate the Mean. Do this for each of the statistical values. Note: most spreadsheet software has a premade formula to calculate these values.
8. Create a chart that shows the frequency in the Y direction and decimal inches in the X direction. Use class intervals of .25 inches. Place the chart below your initial data.

Based on your chart and your data, are the class heights Normally Distributed? How do you know?