ENGR 1181 Class 5: Excel Graphing
After Class Assignment

Define – Problem Statement
You are an Aerospace Engineer working on designing a drone for a delivery company, below is a table of performance data for two aircraft engines. The data relates engine speed in revolutions per minute (RPM) to the power generated by the engine in horsepower. Following the process below, create a single graph of Power versus Engine Speed with a line for each engine. Then examine the graph to help you answer the two questions below.

Table 1: Performance Data for Aircraft Engine A and Engine B

<table>
<thead>
<tr>
<th>Engine Speed (RPM)</th>
<th>Engine A Power (Horsepower)</th>
<th>Engine B Power (Horsepower)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2100</td>
<td>100</td>
<td>94</td>
</tr>
<tr>
<td>2300</td>
<td>106</td>
<td>103</td>
</tr>
<tr>
<td>2500</td>
<td>112</td>
<td>112</td>
</tr>
<tr>
<td>2700</td>
<td>118</td>
<td>120</td>
</tr>
<tr>
<td>2900</td>
<td>120</td>
<td>125</td>
</tr>
<tr>
<td>3100</td>
<td>121</td>
<td>128</td>
</tr>
<tr>
<td>3300</td>
<td>122</td>
<td>130</td>
</tr>
</tbody>
</table>

Instructions

Represent/Plan
- Open a new worksheet in Excel and create a table based on the data given above.

Implement
- Create a single X-Y Scatter plot with lines connecting the data points. This plot should display Power vs. Engine Speed for both engines.
- Change the axes to the following limits: X-axis: 2000-3400 RPM, Y-axis: 80-140 Hp
- Use good graphing practices to complete the plot (title, legend, etc.). You may need to change the marker/line type of one dataset if you are printing on a black and white printer.
- Open a new Word document. At the top of the page include:
  - Your name & seat number
  - Instructor’s name
  - Assignment Name
  - Date
- Cut and paste your table and graph from Excel into the Word document.

Evaluate
- In your Word document, type the answers to the two questions below. Use your graph to find the answers.
  1. Which engine would be better for carrying heavy loads at low engine speeds? Why?
  2. Which engine would be better for carrying heavy loads at high engine speeds? Why?