For this problem set, use the same data as for the first set. The JMP analysis output should be used to reduce your arithmetic.

1. Complete the table of differences below.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Diet (D)</th>
<th>Niacin (N)</th>
<th>Statin (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>221</td>
<td>192</td>
<td>180</td>
</tr>
<tr>
<td>Exercise (E)</td>
<td>234</td>
<td>13</td>
<td>42</td>
</tr>
<tr>
<td>Diet (D)</td>
<td>221</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Niacin (N)</td>
<td>192</td>
<td>−29</td>
<td>0</td>
</tr>
</tbody>
</table>

2. Give the numerical value of $s^2_{p_n} = \frac{960.625}{5} = 192.125$.

3. Use the underscoring method to indicate the significant difference among treatments.
   a. Fisher’s LSD: E $\underline{D}$ $\underline{N}$ S
   b. Duncan’s NMR: E $\underline{D}$ $\underline{N}$ S
   c. S-N-K: E $\underline{D}$ $\underline{N}$ S
   d. Turkey’s HSD: E $\underline{D}$ $\underline{N}$ S

4. How large a difference is necessary for significance between Diet and Statin using.
   b. Duncan’s NMR: 43.6.
   d. Turkey’s HSD: 56.1.
   e. Scheffé’s Method: 61.1.

5. If all cholesterol levels were comparable prior to the study and all treatments are equally safe,
(a) For an ANOVA what assumption must be made about the patients in the group? They are randomly selected from a normally distributed population. All groups have a common variance. They are not treated before experiment.

(b) Which procedure would you recommend to the physician? Explain Why.
   Turkey’s HSD. The standard has to be rigid to minimize type I errors, since it’s a serious issue to usher in a new treatment.