Wait Time Analysis

“Customer Satisfaction has always been one of my priorities”, said Heather to the group of new patients preparing to register at the front desk at Heather’s Beanie Baby Hospital. “We only use the best materials to nurse your injured Beanie Babies back to health and only hire the most polite and competent front desk and technical staff.”

“We are very concerned that patients don’t wait too long in our waiting room. Unhappy customers don’t come back and we don’t want that to happen. So we also record the check-in time (when the patient arrives) and the call-back time (when the patient is called back to an exam room) for every patient every day. That way we can calculate and analyze patient wait times, defined as the call-back time minus the check-in time, on an on-going basis. Our goal is that three-quarters of patients are called back in fifteen minutes or less and no more than 5% of patients have to wait more than twenty minutes.”

“Of course, I don’t know enough about Excel to calculate the wait times and analyze them, but I’m sure that I can find someone to help me out”, thought Heather, as she made a note to ask her dad to recruit an MBA or MHA student to do the analysis for her.

The check-in and call-back times from last month are stored in the “Cases.xls” file in the “Heather – H – Wait Time” worksheet. Somewhere along the line someone calculated the wait times but then copy and pasted the values (using “Edit | Paste Special | Values) and then deleted the formulas.

1. Please help Heather by creating a histogram displaying the data in five minutes intervals (see the table below). Did she meet her stated wait time goals?

<table>
<thead>
<tr>
<th>Wait Time Intervals</th>
<th>0-5 minutes</th>
<th>6-10 minutes</th>
<th>11-15 minutes</th>
<th>16-20 minutes</th>
<th>21-25 minutes</th>
<th>26-30 minutes</th>
</tr>
</thead>
</table>

2. Heather noticed that time that patients waited seemed longer on some days of the week than others. Create a pivot table to analyze the average wait time by day of week to see if this is true.

3. Just for practice, re-create the formulas to calculate the wait times in an empty column.
**Formatting Practice**

Open the “Humpty-Dumpty.xls” file and check out the “fix this” and “original” worksheets. Both worksheets started out exactly the same, but the organization and formatting in the “fix this” worksheet have been changed and shuffled to look at it does now.

Practice your spreadsheet skills by cleaning up the “fix this” worksheet so that it looks like the “original” worksheet again.

You’ll likely need to add or delete rows or columns, apply the Format Painter and use the autofill feature.

**Pie Chart Practice**

The following table contains a breakdown of the four types of animals most commonly taken care of at Heather’s Beanie Baby Hospital.

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bears</td>
<td>257</td>
<td>285</td>
<td>315</td>
</tr>
<tr>
<td>Cats</td>
<td>115</td>
<td>121</td>
<td>137</td>
</tr>
<tr>
<td>Dogs</td>
<td>354</td>
<td>449</td>
<td>562</td>
</tr>
<tr>
<td>Birds</td>
<td>42</td>
<td>65</td>
<td>31</td>
</tr>
</tbody>
</table>

Create the following pie charts:

1. Breakdown of which types of animals were seen at the hospital in 1998
2. Breakdown of dogs brought to the hospital over the three years
3. Repeat #1 for the year 2000
4. Repeat #2 for birds