Graphics for Quantitative Variables

1) When the responses from the Spring 2000 ST201 class surveys were compiled the results from the question pertaining to how students got to school each day were used to construct a pie chart – See Figure 1. Assuming that a survey was completed by each student enrolled in ST201 that spring, how many students were taking the class?

![Figure 1: Transportation modes for STCC201 Students](image)

2) Based on the boxplot of student incomes – Figure 2 – the distribution’s shape can be classified as:
   A) Symmetric
   B) Positive Skew
   C) Negative Skew

3) A veterinary oncology research team has been investigating the effects of a new drug treatment on dogs that have been diagnosed with osteosarcoma. The variable of interest in this study is the “disease free interval”. This is the length of time (days) that the patient is out of remission following aggressive radiation treatment. The following 7 DFIs were recorded for a random sampling of 7 osteosarcoma patients:

   Table 1: DFIs for osteosarcoma patients following radiation treatment (days)
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<tbody>
<tr>
<td>92</td>
<td>105</td>
<td>116</td>
<td>154</td>
<td>161</td>
<td>187</td>
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   A) Compute the sample mean for this set of 7 DFI values

   B) This sample mean is an example of (circle only 1)

<table>
<thead>
<tr>
<th>A) Quantitative Cont. Variable</th>
<th>B) Quantitative Discrete Variable</th>
<th>C) Point Estimate</th>
<th>D) Parameter</th>
<th>E) Statistic</th>
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<td>A)</td>
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4) From the following set of graphics choices, choose the graphic that would best be used to demonstrate the results of the study. More than one choice may be appropriate.

| A) Histogram | B) Box Plot | C) Multiple Box Plot | D) Time Series Plot | E) Multiple Time Series Plot |

A) A property management company would like to investigate the distribution of rental rates for 3-bedroom single family homes in the city. A representative of the management company selects a SRS of 175 3-bedroom single family homes and records their monthly rental rates.

B) The same management company would like to compare rental rates for 3-bedroom single family homes in the north part and the south parts of the city.

C) The company representative would like to compare average monthly rental rates from the north and south parts of the city and she’s also interested in seeing how these rates may have changed since 1985.

D) A new set of educational standards has been implemented in one of the state’s school districts and the superintendent would like to track the student performance on a locally distributed standardized exam.