Questions 1 - 4 refer to the following example from a study by Busch entitled “Gender, Group Composition, Cooperation, and Self-efficacy in Computer Studies.” published in the Journal of Educational Computing Research 15: 125-135 in 1996.

The respondents in this study were 150 students in groups formed by the college administrators at the beginning of the fall semester. Students were asked to rate themselves on several factors:

1) **Self Efficacy in computing**: The students were asked to rate how confident they were in performing each of four computer tasks on a 5 point scale from “no confidence at all” to “complete confidence”. Responses to the 4 questions were summed.

2) **Previous Computer Experience**: The students were asked on a 5 point scale to what extent they had worked with wordprocessing, spreadsheet programs, programming, or computer games before attending college. Responses to the 4 questions were summed.

3) **Previous Encouragement to Work with Computers**: The subjects rated on a 5 point scale ranging from 1 to 5 the extent to which their decision to use computers had been influenced by parents, school teachers, and friends.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Female Students (n=63)</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Male Students (n=87)</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self efficacy in computing</td>
<td></td>
<td>10.7</td>
<td>2.8</td>
<td>12.8</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>Previous computer experience</td>
<td></td>
<td>8.5</td>
<td>2.8</td>
<td>10.4</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Previous computer encouragement</td>
<td></td>
<td>5.4</td>
<td>2.1</td>
<td>6.7</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

1. What is the highest possible value that someone could have had on the self-efficacy in computing variable?

2. Who received more previous computer encouragement on average - males or females?

3. Which group - males or females - has more variation in the amount of previous computer experience they have had?
4. If the researchers hypothesized that females would receive more encouragement to work with computers than males, would their hypothesis be correct or incorrect?

5. If the college administrators decided that for a student to be considered competent with computers their score should be at least 16.2 on the self-efficacy measure. If we assume that these male and female students reflect the population of students at this college and that their responses are normally distributed, about what percentage of males and what percentage of females would we estimate would be considered competent at computers?
Questions 6 - 8 refer to the following SPSS Output:

A survey was given to 333 ECU students in Spring 2002. Students were asked several questions including:

*Life Satisfaction:* On a scale from 1 to 5, all things considered, how satisfied are you with your life as a whole these days? 1 = Dissatisfied, 5 = Satisfied

*Partner:* Do you have any one person you would consider your significant other, spouse, partner, or boyfriend/girlfriend? 1 = Yes, 0 = No

<table>
<thead>
<tr>
<th>PARTNER Has a partner</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFESAT Life Satisfaction 0 No</td>
<td>138</td>
<td>3.75</td>
<td>.958</td>
<td>.082</td>
</tr>
<tr>
<td>1 Yes</td>
<td>195</td>
<td>3.98</td>
<td>.873</td>
<td>.063</td>
</tr>
</tbody>
</table>

6. Which group has a higher average level of life satisfaction - students with partners or those without partners?

7. Which group has more variation in their level of life satisfaction - students with partners or those without partners?

8. What percentage of the students surveyed were male?
Questions 9-10 are based on the following example:

A researcher believes students who graduated in the top ten percent of their high school graduating class consume less alcohol during their first two years in college than those who did not graduate in the top ten percent. He takes a random sample of ECU juniors and gives them an anonymous survey asking them about the average number of drinks they consumed per week during their first two years. Students answer on this question ranged from 0 to 50 drinks.

9. What is the dependent variable in the researcher’s hypothesis?
   a. Top 10% or not
   b. Drinking or not drinking alcohol
   c. Average number of drinks per week
   d. Graduating from high school

10. In order to examine the relationship between these two variables in the sample, the researcher would construct a _________________.
    e. contingency table/ crosstabs table
    f. a difference of means test
    g. either