Quiz P.2   AP Statistics   Name:

1. How can we help wood surfaces resist weathering, especially when restoring historic wooden buildings? A study of this question prepared wooden panels and then exposed them to the weather. Here are some of the variables recorded. Identify each of these variables as categorical or quantitative. Then give a possible value for each variable.

<u>Categorical or quantitative?</u>   <u>Possible value</u>

(a) Type of wood

(b) Water repellent

(c) Paint thickness

(d) Paint color

(e) Weathering time

2. Students in a high school statistics class were asked to report how many siblings they have. Here are the data:

1	2	1	2	3	2	1	1	2	3
0	1	4	2	1	2	1	7	0	1
0	2	2	5	2	1	1	0	1	1
3	1	2	1	1	2	3	2	4	2

(a) Construct a dotplot to display these data.

(b) How many siblings does a "typical" student in the class have? Justify your answer.

(c) Are there any really unusual values in the data set? Explain.

3. What percent of young adults regularly talk on a cell phone while driving? You have been asked to direct a study to investigate this issue. Would you recommend a survey, an experiment, or an observational study? Explain carefully why you chose the design you did, and why you did not choose the other two possible designs.

4. News from the auto color front: fewer luxury car buyers are choosing "neutral" colors (silver, white, black). Here is the distribution of the most popular colors for 2005 model luxury cars made in North America:

(a) What percent of vehicles are some other color?

(b) Make a bar graph of the color data.

Color	Percent
Silver	20%
White, pearl	18%
Black	16%
Blue	13%
Light brown	10%
Red	7%
Yellow, gold	6%

(c) Here are similar data for luxury cars made in Europe. Make a graph of these data.

Color	Percent
Black	30%
Silver	24%
Gray	19%
Blue	14%
Green	3%
White, pearl	3%

(d) What are the most important differences between choice of colors in Europe and North America?