A. P. Statistics

Name _____

Period _____

Study Guide 1.1 A

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Introduction

INDIVIDUALS AND VARIABLES

Individuals are _____

A variable is _____

When you meet a new set of data, ask yourself the following questions:

1.

2.

3.

EXAMPLE 1.1

What are the individuals in the data set?

List three variables:

What is ***exploratory data analysis*** ?

CATEGORICAL AND QUANTITATIVE VARIABLES

A **categorical variable** _____

A **quantitative variable** _____

The _____ of a variable tells us what values it takes and how often it takes these values.

The distribution for a categorical variable lists the _____ and gives either _____ or _____ of individuals who fall in each category.

Briefly describe a **bar chart.**

Briefly describe a **pie chart.**

Briefly describe a **dot plot**

Briefly describe a **histogram.**

EXAMPLE 1.2

How should you generate the histogram (by hand) in Figure 1.2?

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Interpreting histograms

After you make a graph, always ask, _____?

OUTLIERS

An **outlier** in any graph of data is an _____

_____

What are the three outliers in Figure 1.2?

OVERALL PATTERN OF A DISTRIBUTION

To describe the overall pattern of a distribution:

- _____
- _____

EXAMPLE 1.3

What does is mean for a distribution to be **symmetric**? Include a sketch.

What does is mean for a distribution to be **skewed to the right**? Include a sketch.

SYMMETRIC AND SKEWED DISTRIBUTIONS

A distribution is **symmetric** if _____

_____

A distribution is **skewed to the right** if the right side of the histogram (containing the upper half of the observations)_____

_____

Stemplots

EXAMPLE 1.4

To make a stemplot, separate each observation into a **stem** consisting of

_____ and a **leaf,** _____ .

Write the stems _____.

The stemplot looks like a _____ or a _____.

There are two variations of a stemplot that give us more flexibility in graphing a distribution.

We can _____ or _____

Time plots

TIME PLOT

A **Time plot** of a variable plots _____ against

_____ . Always mark the _____ on the

horizontal axis and the _____ on the **vertical axis.**

If there are not too many points, connecting the points by lines helps show

EXAMPLE 1.5

What does the time plot in this example show?