

Elementary Statistics

Name: \_\_\_\_\_

Study Guide 4

Class: \_\_\_\_\_

Due Date: \_\_\_\_\_

Score: \_\_\_\_\_

**Your solutions must be consistent with class notes & resources.**

Be Neat, Organized, and No Work  $\Leftrightarrow$  No Points

1. Forty workers were randomly surveyed about how long it takes them to travel to work each day. The data below are given in minutes in ascending order:

20 23 24 28 28 30 30 32 34 35 35 37 38 40 40 41 42  
45 45 45 47 47 47 48 48 49 50 50 50 52 52 55 56 58  
59 59 60 62 62 65

- (a) (2 points) What percent of them had a travel time to work below 30 minutes?

(a) \_\_\_\_\_

- (b) (3 points) Draw the stem plot. Key:  $5|3 = 53$ ,  $10|0 = 100$

Stem(tens) || Leaf(units)

The diagram shows a stem plot template. It consists of a vertical line (the stem) and a horizontal line (the leaf line) that intersects the vertical line. The vertical line is labeled "Stem(tens)" and the horizontal line is labeled "Leaf(units)". The intersection point is marked with two vertical bars. The stem line extends downwards from the leaf line, and the leaf line extends to the right.

- (c) (4 points) Find the range and the midrange of this data.

(c) \_\_\_\_\_

- (d) (2 points) Find the class width if we wish to construct a frequency distribution table with 5 classes starting with the minimum value of the data set.

(d) \_\_\_\_\_

(e) (8 points) Complete the frequency distribution table below starting with the minimum value of the data set:

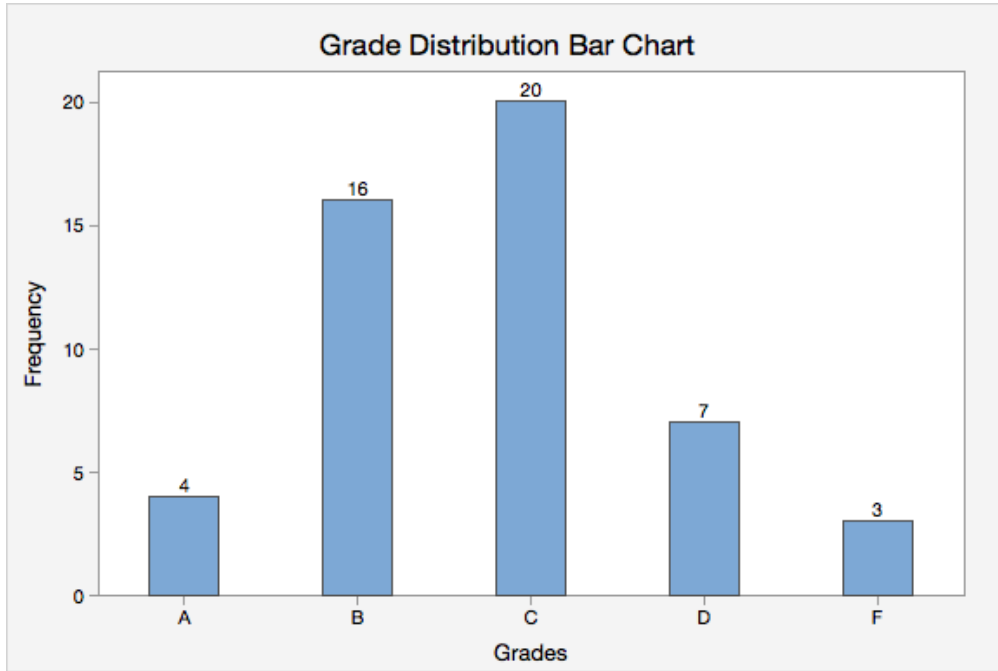
Class Boundaries	Class Midpoint	Class Frequency	Cumulative Frequency	Relative Frequency	Percentage Frequency

(f) (5 points) Draw the relative histogram by using class midpoints and relative frequencies. Clearly label and mark your graph.

(g) (5 points) Draw the ogive. Clearly label and mark your graph.

(h) (5 points) Draw the frequency polygon. Clearly label and mark your graph.

2. The grade distribution for a statistic class is displayed in the bar chart below:



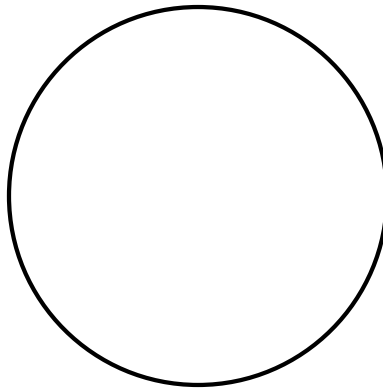
(a) (2 points) How many students received a grade in this class?

(a) \_\_\_\_\_

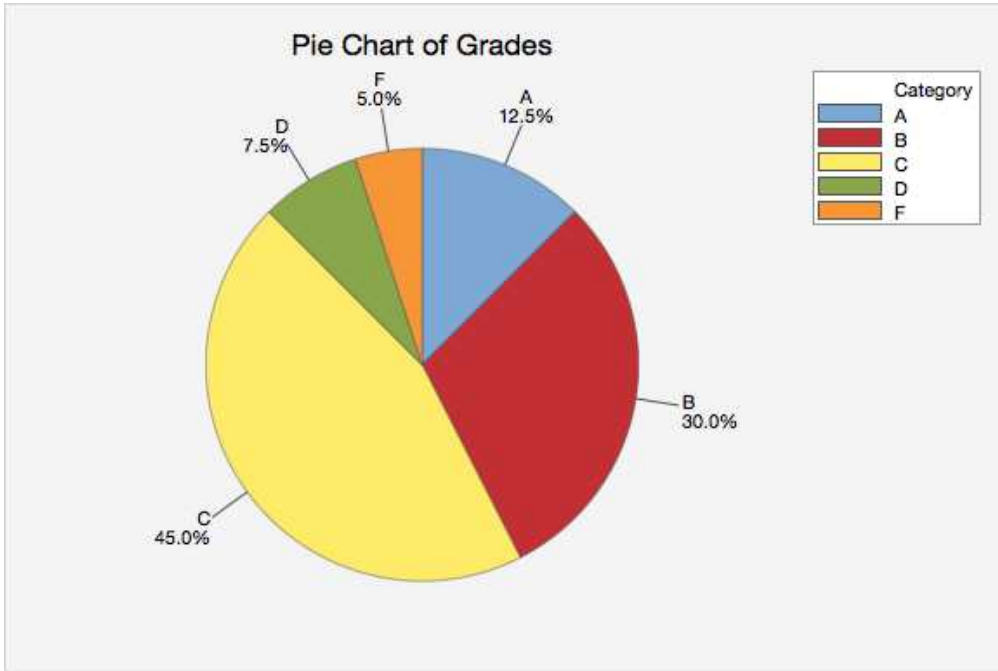
(b) (2 points) What percentage of students received B grade in this class?

(b) \_\_\_\_\_

(c) (4 points) Construct pie chart for grade distribution in this class. Clearly mark and label your graph.



3. The grade distribution for a class of 80 students is displayed in the pie chart below:



(a) (2 points) How many students received B grade in this class?

(a) \_\_\_\_\_

(b) (2 points) What percentage of students received at least C grade in this class?

(b) \_\_\_\_\_

(c) (4 points) Construct the bar graph for grade distribution in this class. Clearly mark and label your graph.

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*Always review your notes before attempting these study guides.*