Math 153 - Quiz 2

January 29, 2015

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (6 points) The following are the gas mileages, in miles per gallon, of a number of U.S. automobile models.

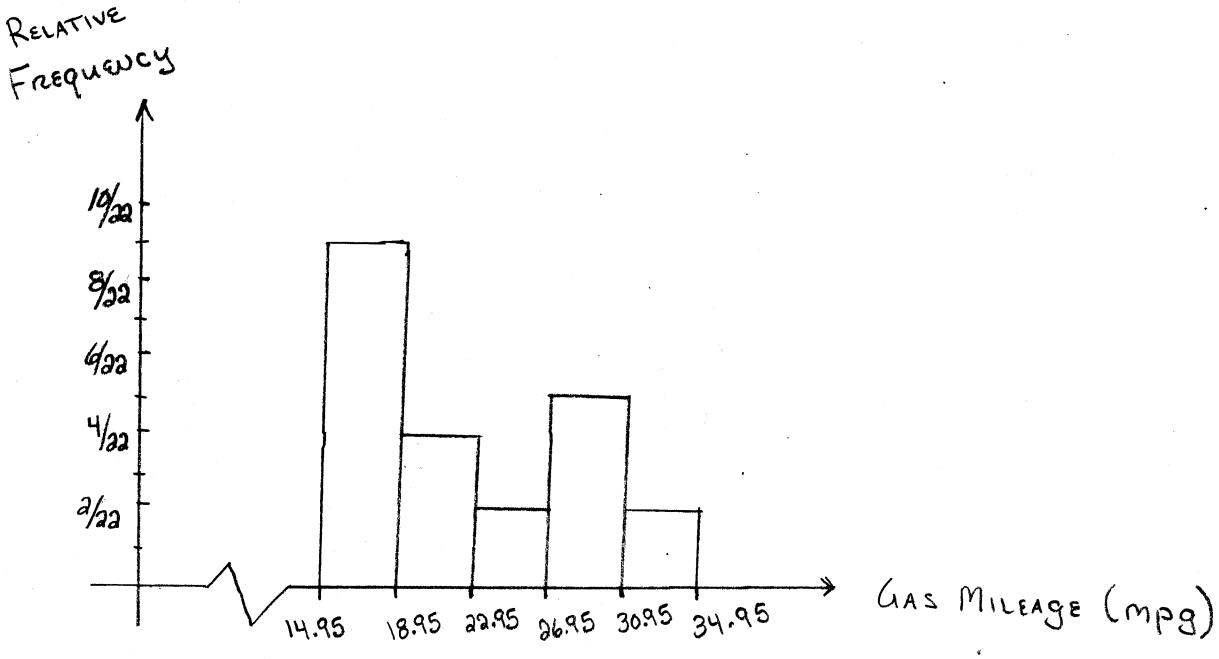
MIN = 15.5
MAX = 33.5

16.9 15.5 19.2 18.5 30.0 30.9 20.6 20.8 18.6 18.1 17.0
17.6 16.5 18.2 26.5 21.9 27.4 28.4 28.8 26.8 33.5 34.2

(a) Construct a frequency distribution for the gas mileages above. Use at least 5 classes.

Gas Mileage (mpg)	Frequency
15.0 - 18.9	9
19.0 - 22.9	4
23.0 - 26.9	2
27.0 - 30.9	5
31.0 - 34.9	2

(b) Using class boundaries for tick marks along your horizontal axis, construct the relative frequency histogram corresponding to your frequency distribution.



2. (4 points) The frequency distribution shown below gives the daily high temperatures (in °F) last year in Cleveland, OH.

High Temp (°F)	Frequency
20.0–30.8	19
30.9–41.7	43
41.8–52.6	68
52.7–63.5	69
63.6–74.4	74
74.5–85.3	68
85.4–96.2	24

(a) What is the class width?

$30.9 - 20 = \boxed{10.9}$

(b) What are the class boundaries associated with the last class listed above?

85.35 – 96.25

(c) What are the class midpoints?

25.4, 36.3, 47.2, 58.1, 69.0, 79.9, 90.8

(d) Do the temperatures appear to be normally distributed? Explain.

PERHAPS ROUGHLY, BUT IT LOOKS LIKE THE TEMPS PEAK SLIGHTLY TO THE RIGHT OF CENTER MAKING THE DISTRIBUTION LOOK SOMEWHAT SKEWED LEFT.