## Statistics Intro

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1. Give the sampling method (random, systematic, convenience, or stratified) for each scenario.
(a) In order to determine what ice cream flavors would sell best, a grocery store manager polls 20 shoppers that come to the frozen foods section in a 30 -minute period.
(b) Fourth grade reading levels across the county were analyzed by the school board by randomly selecting 25 fourth graders from each elementary school in the county. The goal was to compare schools.
(c) To conduct a survey on collegiate social life, you knock on every $5^{\text {th }}$ dorm room door on campus.
(d) Student ID numbers are randomly selected from a computer printout for free tickets to the championship game.
(e) To determine the average number of cars per household, each household in 3 of the 14 local counties were sent a survey regarding car ownership.
2. Gas mileages (measured and rounded to the nearest mile per gallon) are shown below for various company cars.

| 22 | 23 | 16 | 24 | 30 | 17 | 36 | 22 | 25 | 27 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 30 | 29 | 38 | 20 | 18 | 15 | 18 | 17 | 20 | 33 |
| 24 | 32 | 20 | 26 | 28 |  |  |  |  |  |

Complete the frequency chart below for 5-point bins, starting with the given class.

| Mileage (mpg) | Frequency (\# of cars) | Relative Frequency | Cumulative Frequency |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| $15-19$ |  |  |  |

Then make a histogram for this data set. Use boundaries on the mileage (horizontal) axis.

3. In a recent year, City of Tifton Operations included 7 general funds, 6 of which are largely self-supporting. The total budget is approximately $\$ 27.2$ million for this year. Round to the nearest hundred thousand dollars.

(a) Approximately how much money is budgeted for general operations?
(b) Approximately how much money is budgeted for gas or water?
4. Refer to the following stacked double broken line graph involving the numbers of college degrees awarded to men and women over time. Remember that the women's broken line graph includes men's and women's combined data.


In 2000, which group had more college graduates, women or men? $\qquad$
How many more?
5. Sally O. Student has made the following scores on her daily assignments so far in Math 1234 during this semester. The grades below include journal entries, quizzes, and practice tests.

| 100 | 92 | 93 | 85 | 82 | 73 | 95 | 68 | 85 | 92 | 84 | 95 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

For this given data set, find each numerical statistic below.
(a) Mean (Round to the nearest tenth.)
(b) Mode(s).
(c) Median $\qquad$
(d) Range $\qquad$
(e) Midrange $\qquad$
(f) First quartile $\qquad$
(g) Third quartile $\qquad$
(h) Interquartile range $\qquad$
(i) Standard deviation $\qquad$

