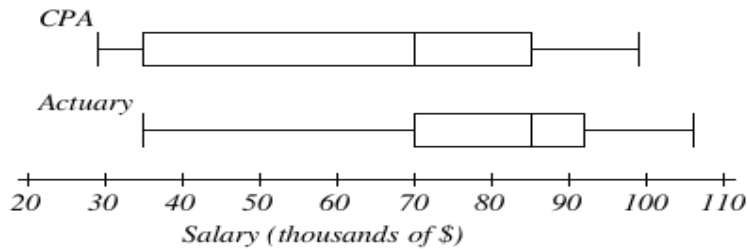


Name: \_\_\_\_\_

School: \_\_\_\_\_

**Elementary Data Analysis  
Math Field Day 2023**

1. The boxplot below shows salaries for Actuaries and CPAs.

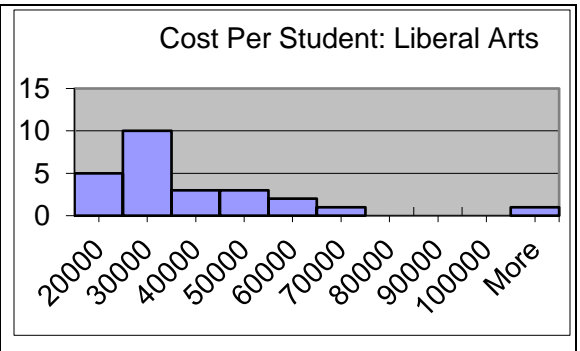


- \_\_\_\_\_ a. If a person is making the first quartile salary for an actuary, they are making more than what percentage of CPAs?
- \_\_\_\_\_ b. What is the median salary of a CPA?
- \_\_\_\_\_ c. What is the first quartile for the salary of actuaries?
- \_\_\_\_\_ d. Is the CPA salary data skewed left, skewed right, or almost symmetric?

2.

Suppose a random sample of liberal arts schools was taken, and the average cost per student was measured for each school. The data are pictured in the histogram on the right. Two measures of center were calculated for this data set and were found to be \$26,668, and \$34,832.

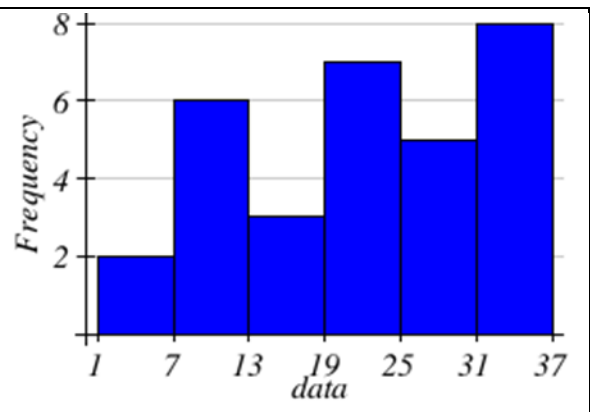
- \_\_\_\_\_ a. Which is the median cost per student?
- \_\_\_\_\_ b. Which is the mean cost per student?



3.

Answer the following questions based on the histogram given on the right.

- \_\_\_\_\_ a. What is the sample size of the data?
- \_\_\_\_\_ b. How many data values are more than 19?
- \_\_\_\_\_ c. The median value will fall in which interval?
- \_\_\_\_\_ d. What is the class width for each interval?



- \_\_\_\_\_ 4. A recent poll found that 30% of those surveyed are worried about aggressive drivers on the road. If **three** people are selected at random, what is the probability that at least one will be worried about aggressive drivers on the road? (round to two decimal places)
- \_\_\_\_\_ 5. A certain car model has a mean gas mileage of 34 miles per gallon (mpg) with a standard deviation 5mpg. What percentage of cars of this model will have mileage between 29 and 39 mpg?
- \_\_\_\_\_ 6. If a gambler rolls two dice and gets a sum of 4, he wins \$10 dollars. If he gets a sum of 3, he wins \$20. The cost to play the game is \$5. What is the expected profit of this game? (Round to two decimal places)