2. Researchers are conducting a state-wide survey for the U.S. Postal Service. The survey records many different variables of interest. Which of the following variables is categorical?

A) County of residence.
B) Number of people, both adults and children, living in the household.
C) Total household income, before taxes, in 2003.
D) Age of respondent.

Answer: A

Topic: 1.1 Displaying Distributions with Graphs

Refer to the previous question. A pie chart of the departments in the school/college from which the 1100 sampled students graduated is shown below.

Based on the graph, (approximately) how many of the sampled students graduated with a degree in Building/Construction or Architecture?

A) 55
B) 59
C) 65
D) 99

Answer: C

Topic: 1.1 Displaying Distributions with Graphs
Use the following to answer questions 14 and 15:

The histogram below represents the height (in inches) of the gold medal-winning high jumps for the Olympic Games up to Sydney 2000.

14. What is approximately the mean height?
A) 75 inches  C) 82 inches
B) 77.5 inches  D) 90 inches
Answer: C
Topic: 1.1 Displaying Distributions with Graphs

15. What is approximately the percentage of these winning jumps that were at least 7’1” high (85 inches)?
A) 9%  C) 23%
B) 14%  D) 35%
Answer: D
Topic: 1.1 Displaying Distributions with Graphs
The timeplot below gives the number of burglaries committed each month for a city in Ohio. The plot is for the three-year period January 1987—December 1989.

24. What is approximately the number of burglaries in December 1989, the last date recorded in the timeplot?
   A) 22
   B) 27
   C) 32
   D) 37
   Answer: A
   Topic: 1.1 Displaying Distributions with Graphs

25. Determine whether each of the following statements is true or false.
   A) The number of burglaries in each month of 1988 was lower than the number of burglaries in each month of 1989.
   B) The median number of burglaries per month in 1988 was a little over 25.
   C) The total number of burglaries in 1989 was higher than in 1988.
   D) The graph is bimodal.
   Answer: A) False, B) False, C) True, D) False
   Topic: 1.1 Displaying Distributions with Graphs

26. What is approximately the maximum number of burglaries for a month in 1988?
   A) 20
   B) 25
   C) 30
   D) 35
   Answer: D
   Topic: 1.1 Displaying Distributions with Graphs
A boxplot of a different sample of 20 salaries from this same company is shown below.

99. For each of the following sentences, fill in the blank.
   A) The maximum salary is approximately \_\_\_\_\_\_\_\_\_ dollars.
   B) The minimum salary is approximately \_\_\_\_\_\_\_\_\_ dollars.
   C) The interquartile range is approximately \_\_\_\_\_\_\_\_\_ dollars.
   D) Seventy-five percent of the employees in this sample of 20 earn more than \_\_\_\_\_\_\_\_\_ dollars.

Answers: A) $97,000, B) $35,000, C) $20,000, D) $45,000

Topic: 1.2 Describing Distributions with Numbers

100. Based on this boxplot, answer each of the following questions with yes, no, or can't tell.
   A) The salary distribution is fairly symmetric?
   B) Do about 10 employees make more than $55,000?
   C) Does nobody make more than $71,000?
   D) Is the range of the salaries roughly $35,000?

Answers: A) Can't tell, B) Yes, C) No, D) No

Topic: 1.2 Describing Distributions with Numbers

101. Based on this boxplot, determine the (approximate) values of the five-number summary.

Answer: Min = $35,000, Q₁ = $45,000, M = $55,000, Q₃ = $65,000, Max = $97,000

Topic: 1.2 Describing Distributions with Numbers