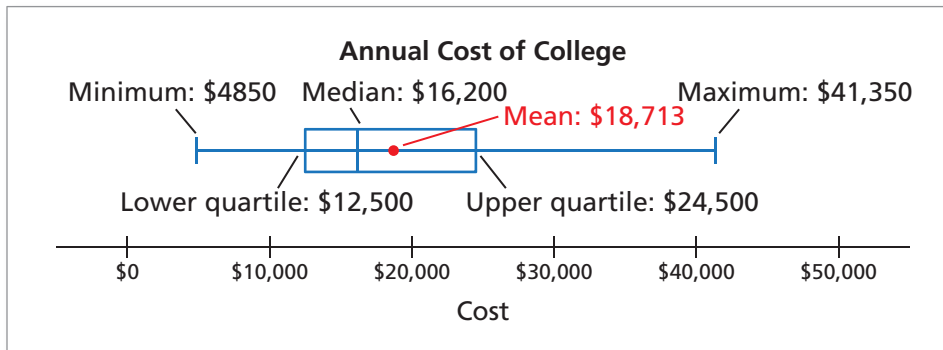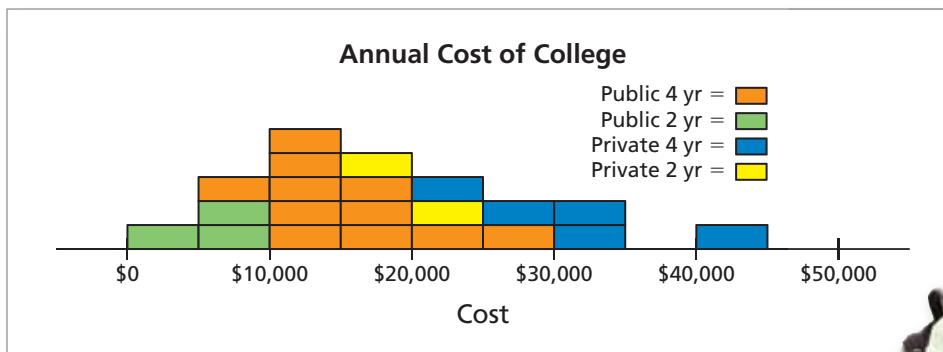**Annual Cost of College** The box-and-whisker plot shows the annual cost for undergraduate tuition, room, and board at 21 public and private colleges. In Exercises 9–12, use the box-and-whisker plot. *(See Example 3.)*

Annual Cost of College

Minimum: $4850   Median: $16,200   Maximum: $41,350
                              Mean: $18,713

Lower quartile: $12,500   Upper quartile: $24,500

$0 $10,000 $20,000 $30,000 $40,000 $50,000

Cost

9. How many colleges have an annual cost between $12,500 and $24,500?

10. Are there more colleges above or below the mean annual cost? Explain your reasoning.

11. The annual costs are divided into four quartiles, each of which contains about 25% of the data. In which quartile are the data most spread out? least spread out? Explain your reasoning.

12. The annual cost to attend college A is $10,780. In which quartile does this college belong?

Annual Cost of College The color-coded histogram shows the data from the box-and-whisker plot above in a different way. In Exercises 13–16, use the histogram. *(See Example 4.)*

Annual Cost of College

Public 4 yr =
Public 2 yr =
Private 4 yr =
Private 2 yr =

$0 $10,000 $20,000 $30,000 $40,000 $50,000

Cost

13. Can you use the histogram to find the mean, median, or mode of the annual costs? Explain your reasoning.

14. Which annual cost interval contains the most data values?

15. How many of the colleges have an annual cost less than $20,000?

16. Which type of college seems to be the most expensive? Explain your reasoning.