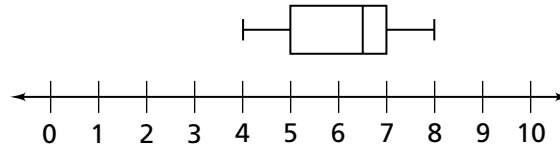


Question Bank

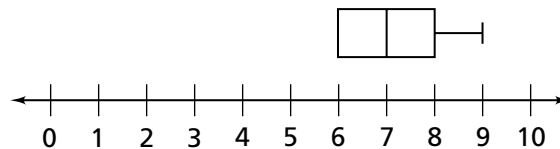
Assign these questions as additional homework, or use them as review, quiz, or test questions.

1. These box plots represent the distribution of the ratings given to four movies by 20 newspapers and magazines. Compare the box plots. Which movie do you believe is the most highly recommended? Explain your reasoning.

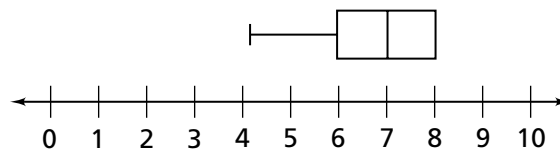
Movie A



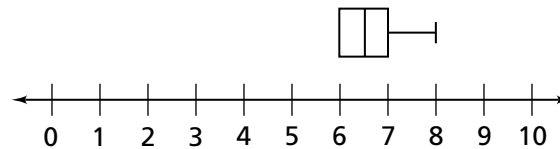
Movie B



Movie C



Movie D



2. a. A class of tenth-grade students counted the change in coins that they had in their pockets, backpacks, or purses. Below are their results. Make a box plot of these data.

\$1.35 \$0.42 \$0.85 \$0.35 \$0.75 \$0.90 \$1.02 \$3.64 \$0.20 \$0.35 \$0.45
\$0.75 \$0.12 \$0.10 \$0.80 \$1.75 \$1.12 \$0.41 \$0.28 \$0.25 \$0.25 \$0.40

- b. Describe what your box plot tells you about the typical amount of change carried by a student in this class.

3. A group of students wondered how many raisins were in a bowl of a particular breakfast cereal. They filled 20 identical bowls with cereal and counted the raisins in each bowl. Their results are shown to the right.

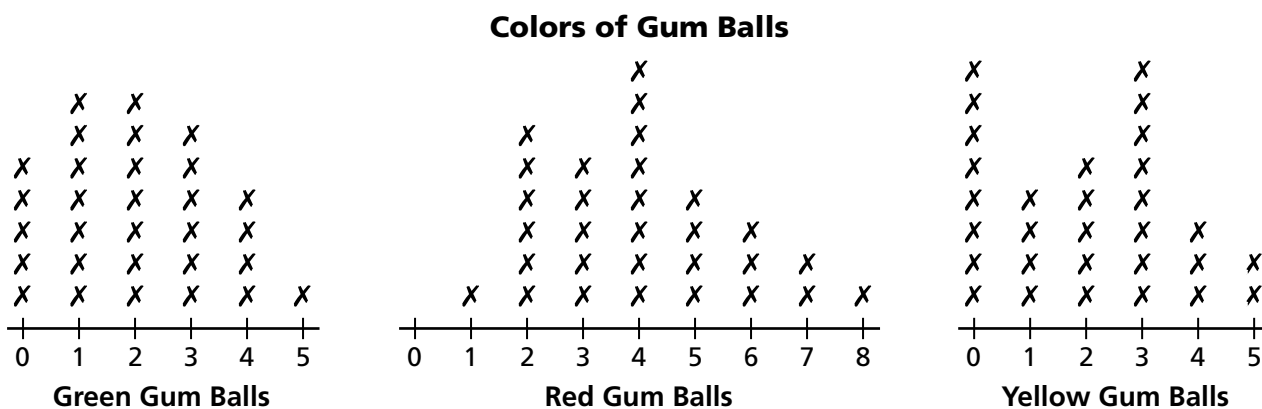
Bowl	Number of Raisins	Bowl	Number of Raisins
1	14	2	18
3	21	4	13
5	22	6	20
7	19	8	24
9	19	10	22
11	21	12	12
13	19	14	17
15	14	16	11
17	10	18	23
19	25	20	12

- a. Make a box plot or a histogram showing the number of raisins in each bowl.
- b. Suppose the cereal boxes are filled from a large container that holds 400 bowl-size servings. Use your sampling distribution to estimate how many raisins are in one of these large containers.

c. Are you confident about your prediction? Explain why or why not.

4. At the parade, the local dentists were tossing packets of sugarless gum balls to the children. Sook Leng wondered how the gum balls had been put into the packets. One dentist told her that each packet contained 8 gum balls, which came in green, red, and yellow. A total of 40,000 gum balls had been mixed thoroughly and put into the packets. However, the dentist did not know the mix of colors in the batch of 40,000.

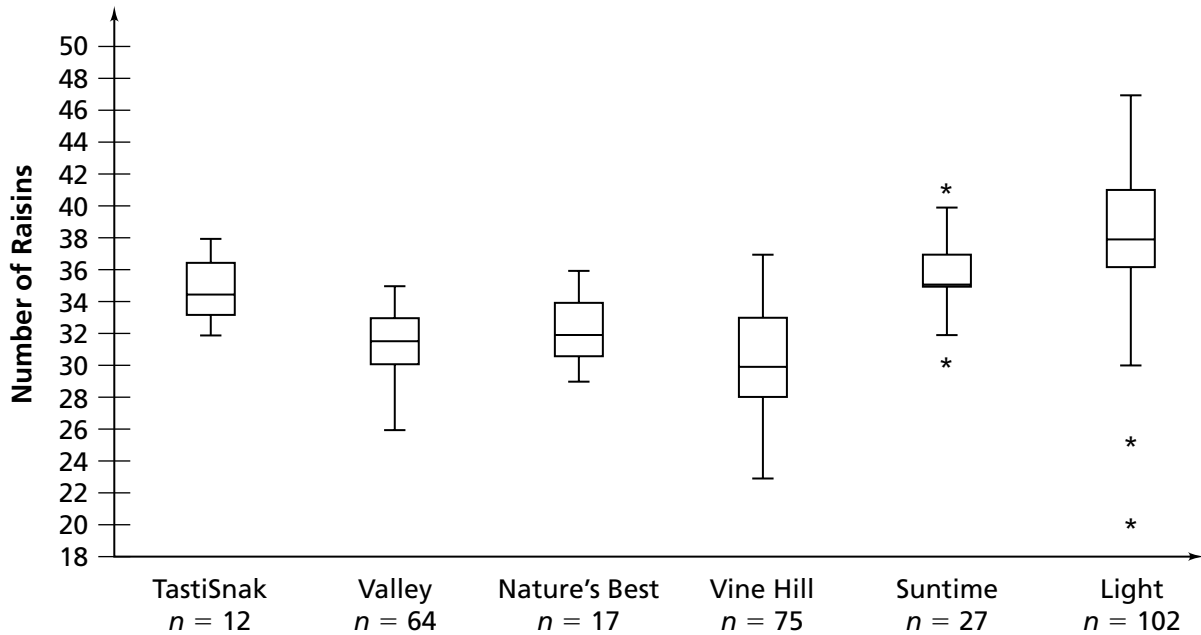
Sook Leng asked the children near her to tell her the number of each color of gum ball in their packets. When she went home, she made three line plots from the data she had collected from 30 packets. The line plots are shown below.



- a. Make a box plot of the distribution of the number of gum balls of each color. Draw your three box plots on the same scale.
- b. Using your box plots, estimate how many—or about what percent—of the 40,000 gum balls were green, how many were red, and how many were yellow. Explain your reasoning.

Several brands of raisins are packaged in half-ounce boxes. The box plots below show the distribution of the numbers of raisins found in the boxes opened for each brand.

Raisins in Half-Ounce Boxes



- Name each brand of raisins, and tell how many boxes were counted in that sample.
- Look at the box plot for the Sundtime brand of raisins. The median and the lower quartile are identical. What must be true about the data for this to be so?
- Which brands of raisins appear to have similar numbers of raisins in their half-ounce boxes? Explain your reasoning.
- Compare Light brand raisins with Valley brand raisins. Which brand generally has more raisins in a half-ounce box? Explain.