**8-4 Skills Practice**

***Distributions of Data***

**1. TESTING SITES** The total number of students taking the SAT at a sample of testing centers is shown.

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| **Number of Students** |
| 105, 86, 98, 112, 92, 72, 102, 96, 112, 76, 117, 107, 88, 104, 90, 68, 105, 82,75, 115, 97, 106, 82, 64, 103, 58, 96, 102, 118, 95, 87, 102, 81, 116, 97, 110 |

 **a.** Create a histogram. Then describe the shape of the distribution.

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 **b.** Describe the center and spread of the data using either the mean and standard deviation or

the five-number summary. Justify your choice.

**2. BARBER** A barber keeps track of the total number of customers he has each day for a sample of days.

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| **Number of Customers** |
| 16, 18, 22, 10, 24, 13, 14, 22, 16, 20, 11,20, 18, 10, 19, 12, 14, 20, 11, 8 |

 **a.** Create a box-and-whisker plot. Then describe the

 shape of the distribution.

 **b.** Describe the center and spread of the data using either the mean and standard deviation or

the five-number summary. Justify your choice.

**3. OLYMPICS** The medal counts for the 2002 and 2010 Winter Olympics are shown.

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| **2002** |
| 37, 3, 5, 2, 30, 11, 5, 1, 9, 14, 26, 11, 6,3, 15, 1, 3, 11, 3, 23, 5, 8, 16, 3, 6, 1 |

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| **2010** |
| 3, 8, 1, 25, 2, 34, 2, 3, 11, 13, 7, 17,11, 4, 2, 8, 3, 13, 17, 7, 4, 36, 2, 1 |

 **a.** Construct a box-and-whisker plot for each set of data.

 Then describe the shape of each distribution.

 **b.** Compare the distributions using either the means and standard deviations or the

five-number summaries. Justify your choice.