

End of Chapter Test

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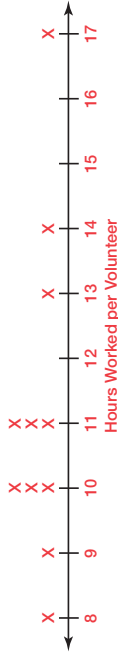
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Name _____ Date _____

1. Some students work as volunteers at the library. The table shows the number of hours each student volunteered during one month.

Hours Worked	10	9	11	8	13	11	17	10	14	10	11
Volunteer	Pat	Juan	Teri	Cassie	Jason	Ben	Erin	Lee	George	Jade	Alicia

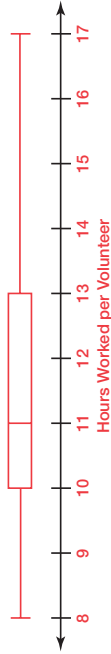
- a. Construct a dot plot to represent the data. Use the number line provided.



- b. Determine the five number summary of the data set.

Minimum = 8
 Q1 = 10
 Median = 11
 Q3 = 13
 Maximum = 17

- c. Construct a box-and-whisker plot of the data set. Use the number line provided.



2. The manager of a bakery wants to compare the sales records of two types of cake. The table shows the number of each type sold per week for 11 weeks.

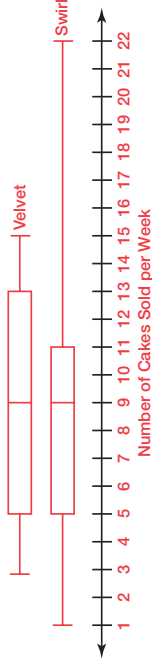
Number of Velvet Cakes	9	11	13	3	9	13	5	13	5	15	7
Number of Swirl Cakes	1	9	5	11	4	10	6	22	11	6	10

- a. Calculate the five number summary and interquartile range (IQR) for each type of cake.

Velvet Cake:
 Minimum = 3
 Q1 = 5
 Median = 9
 Q3 = 13
 Maximum = 15
 IQR = 13 - 5 = 8

Swirl Cake:
 Minimum = 1
 Q1 = 5
 Median = 9
 Q3 = 11
 Maximum = 22
 IQR = 11 - 5 = 6

- b. Construct box-and-whisker plots of each cake's sales using the same number line for both.



- c. Identify any outliers of the data set.

Velvet Cake:
 Lower Fence = $Q1 - (IQR \cdot 1.5)$
 $= 5 - (8 \cdot 1.5)$
 $= -7$
 Upper Fence = $Q3 + (IQR \cdot 1.5)$
 $= 13 + (8 \cdot 1.5)$
 $= 25$
 The Velvet Cake data has no outliers.

Swirl Cake:
 Lower Fence = $Q1 - (IQR \cdot 1.5)$
 $= 5 - (6 \cdot 1.5)$
 $= -4$
 Upper Fence = $Q3 + (IQR \cdot 1.5)$
 $= 11 + (6 \cdot 1.5)$
 $= 20$
 The Swirl Cake data has an outlier at 22.

