

# 8.3.D2 - IQR & OUTLIERS

Calculate the five number summary, the IQR, and the upper and lower fences of the given data set. Determine whether there are any outliers in each set and list them. *If necessary, refer to the 8.3 example "Using the Interquartile Range to Determine if a Data Set Contains Outliers" in the Chapter 8 Summary.*

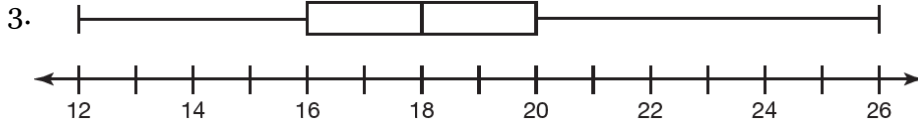
1. 22, 19, 20, 20, 21, 25, 10, 8, 18, 28, 32, 24, & 25

Minimum = \_\_\_\_\_ IQR = \_\_\_\_\_  
 Q1 = \_\_\_\_\_ Upper fence = \_\_\_\_\_  
 Median = \_\_\_\_\_ Lower fence = \_\_\_\_\_  
 Q3 = \_\_\_\_\_ Outliers: \_\_\_\_\_  
 Maximum = \_\_\_\_\_

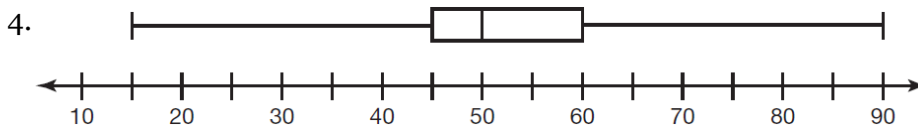
2. 60, 55, 70, 80, 20, 60, 105, 65, 75, 100, 55, 15, 115, 65, 70, 45, & 60

Minimum = \_\_\_\_\_ IQR = \_\_\_\_\_  
 Q1 = \_\_\_\_\_ Upper fence = \_\_\_\_\_  
 Median = \_\_\_\_\_ Lower fence = \_\_\_\_\_  
 Q3 = \_\_\_\_\_ Outliers: \_\_\_\_\_  
 Maximum = \_\_\_\_\_

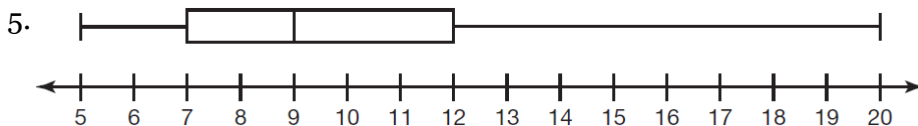
Calculate the IQR and the upper and lower fences of the given data set. Determine whether there are any outliers in each set and list them. *If necessary, refer to the 8.3 example "Using the Interquartile Range to Determine if a Data Set Contains Outliers" in the Chapter 8 Summary.*



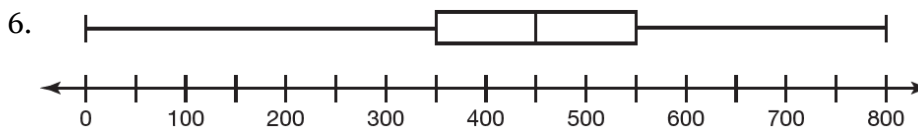
IQR = \_\_\_\_\_  
 Upper fence = \_\_\_\_\_  
 Lower fence = \_\_\_\_\_  
 Outliers: \_\_\_\_\_



IQR = \_\_\_\_\_  
 Upper fence = \_\_\_\_\_  
 Lower fence = \_\_\_\_\_  
 Outliers: \_\_\_\_\_



IQR = \_\_\_\_\_  
 Upper fence = \_\_\_\_\_  
 Lower fence = \_\_\_\_\_  
 Outliers: \_\_\_\_\_



IQR = \_\_\_\_\_  
 Upper fence = \_\_\_\_\_  
 Lower fence = \_\_\_\_\_  
 Outliers: \_\_\_\_\_

Create a dot plot of the given data set. Calculate the mean and median. Determine which measure of center – mean or median – describes each data set. *If necessary, refer to the 8.2 example “Determining the Measure of Center which Best Represents a Data Set” in the Chapter 8 Summary.*

7. 50, 50, 40, 70, 60, 50, 20, 50, 80, 40, 60, 40, & 50                      Dot plot:

Mean = \_\_\_\_\_

Median = \_\_\_\_\_

Best measure of center:

8. 40, 45, 48, 49, 50, 49, 47, 50, 49, 42, 49, 50, 48, 50, & 47                      Dot plot:

Mean = \_\_\_\_\_

Median = \_\_\_\_\_

Best measure of center:

**Spiral Review** – Refer to your 1<sup>st</sup> Semester Summary or your quadratics card.

9. Alicia purchased  $H$  half-gallons of ice cream for \$3.50 each and  $P$  packages of ice cream cones for \$2.50 each. She purchased 14 items and spent \$43. Write a system of linear equations that can be used to determine how many of each item Alicia purchased. *Do not solve.*

10. The domain of the function  $f(x) = 2x^2 - 8$  is  $\{-2, 3, 5\}$ . What is the range?

11. Find the polynomial that is twice the sum of  $4x^2 - x + 1$  and  $-6x^2 + x - 4$ .

12. What are the solutions to the quadratic equation  $3(x - 4)^2 = 27$ ?

13. Which expressions are equivalent to  $4x^2 - 4x - 120$ ? Select ALL that apply.

A.  $2(2x^2 - 2x - 60)$

B.  $4(x^2 - x - 30)$

C.  $4(x + 6)(x - 5)$

D.  $4x(x - 1) - 120$

14. The tables below show the values of four different functions for given values of  $x$ . Which table represents a linear function?

x	f(x)
1	12
2	19
3	26
4	33

x	g(x)
1	-1
2	1
3	5
4	13

x	h(x)
1	9
2	12
3	17
4	24

x	k(x)
1	-2
2	4
3	14
4	28