

Key

Math 1

7-2 Practice

Name _____

Date _____

1. In the 2007 NBA Playoffs LeBron James played in 20 games. His points scored during the 2007 NBA Playoffs are as follows:

23, 27, 30, 31, 21, 36, 18, 30, 20, 23, 10, 19, 32, 25, 48, 20, 14, 25, 25, 24

- a. Use your calculator to find the Five Number Summary.

Min = 10, $Q_1 = 20$, Median = 24.5, $Q_3 = 30$, Max = 48

- b. Use the five number summary to algebraically calculate any outliers.

SHOW ALL WORK

$$IQR = 30 - 20 = 10$$

$$\text{Lower fence: } 20 - 1.5(10) = 5$$

Outliers: 48

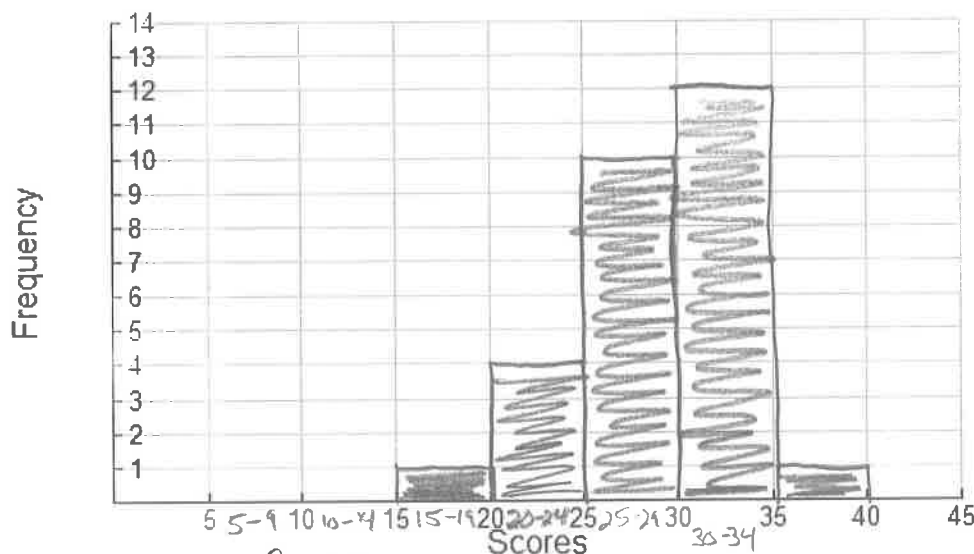
$$\text{Upper fence: } 30 + 1.5(10) = 45$$

- c. Find LeBron's average points per game in the 2007 NBA Playoffs.

$$\text{Mean} = \bar{X} = 25.05 \text{ points per game}$$

2. The data below are the grades out of 50 from a test given earlier this year. Create a histogram below.

31, 28, 21, 21, 28, 32, 18, 30, 32, 28, 28, 30, 21, 21, 33, 33, 25, 21, 25, 28, 32, 31, 35, 30, 28, 31, 21, 32



- a. Describe the distribution.

Shape: Skewed left
Outliers: Possibly 18

Center: About 25-30

$$\text{Spread: } 35 - 18 = 17$$

3. In the 2007 NBA Playoffs Zydrunas Ilgauskas played in 20 games. His points scored during the 2007 NBA Playoffs are as follows:

16, 16, 24, 20, 8, 13, 11, 13, 16, 6, 22, 3, 16, 9, 16, 11, 2, 9, 12, 8

- a. Use your calculator to find the Five Number Summary.

$$\text{Min} = 2, Q_1 = 8.5, \text{Median} = 12.5, Q_3 = 16, \text{Max} = 24$$

- b. Use the five number summary to algebraically calculate any outliers.

SHOW ALL WORK

$$\text{IQR} = 16 - 8.5 = 7.5$$

$$\text{L.F.} : 8.5 - 1.5(7.5) = -2.75$$

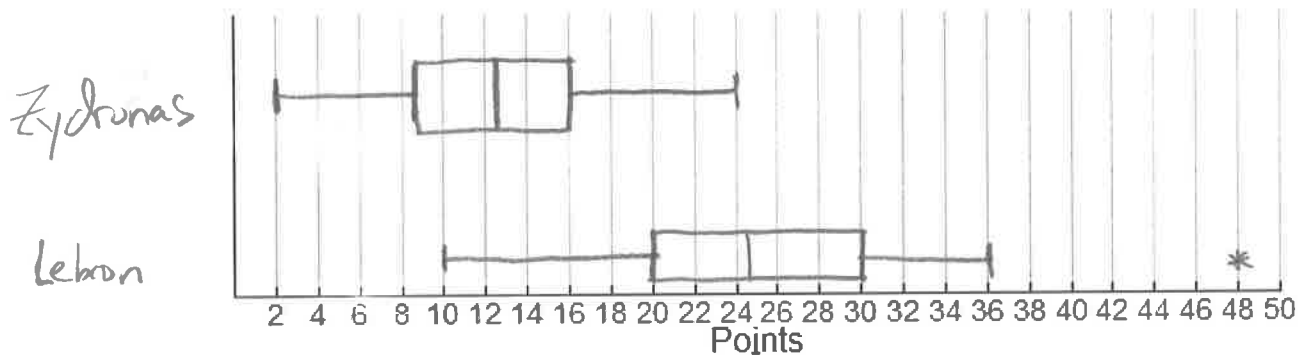
$$\text{U.F.} : 16 + 1.5(7.5) = 27.25$$

Outliers: None

- c. Find Z's average points per game in the 2007 NBA Playoffs.

$$\text{Mean} = \bar{x} = 12.55 \text{ points/game}$$

- d. Create 2 box plots for the points scored by LeBron and Zydrunas in the 2007 NBA Playoffs.



- e. Describe the distributions of the box and whisker plots that you created above.

LeBron

Skewed right (because of outlier)

Outlier: 48

Center: Median = 24.5

Spread: IQR = 10

Z

Approximately normal

No outliers

Median = 12.5

IQR = 7.5

4. According to the statistics, which player would be better to have on a team? Support your answer with statistics.

LeBron! He tends to score more points overall than Z does. He's a little less consistent (more spread/variation), but still scores more.