

# Unit 6 Describing Data Mock Test

## Mean, Median and Mode

1. Justin and TJ are servers at a local restaurant. The table below shows the tips they earned.

Tips	Justin	T.J.
Monday	\$32	\$58
Tuesday	\$45	\$48
Wednesday	\$50	\$40
Thursday	\$33	\$42
Friday	\$50	\$42

Which student has a higher **median** tip for the week and by how much?

- a. Justin's median tip is \$4 more than TJ's median tip.
- b. TJ's median tip is \$4 more than Justin's median tip.
- c. Justin's median tip is \$3 more than TJ's median tip.
- d. TJ's median tip is \$3 more than Justin's median tip.

At a restaurant a manger recorded the sales for one of his servers named Damaria.

2. \$52, \$60, \$48, \$52, \$46, \$52, \$28, \$192, \$71, \$59

Which **center** should be used to best represent the data?

- a. Damaria's mean sale is \$70.
- b. Damaria's median sale is \$52.
- c. Damaria's mode sale is \$52
- d. Damaria's range of her sales is \$164

What is the **mean** of the following data set shown in the dot plot:

- 3.



- a. 7.6
- b. 8.5
- c. 9.5
- d. 9

4. What is the **mode** of the following data set shown in the dot plot:



- a. 7.6
- b. 8.5
- c. 9.5
- d. 9

## MAD (Mean Absolute Deviation)

Consider the data set:

5. 60, 44, 56, 52, 48

Data Points (x)	Mean ( $\bar{x}$ )
60	52
44	52
56	52
52	52
48	52

What is the **mean absolute deviation** of the data set (use the table for help)?

- a. 0  
b. 4  
c. 4.8  
d. 8

6. Consider the data set:

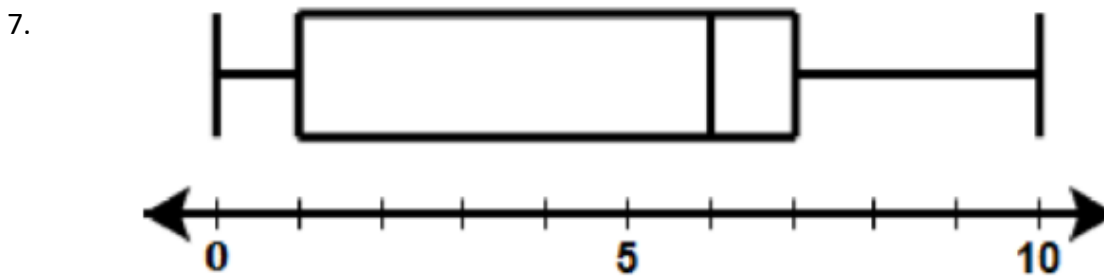
5, 9, 11, 17, 23

The data set has a mean deviation of 5.6. If you were to **double** every number in the data set and recalculate the mean deviation, what would it be?

- a. 5.6  
b. 7.6  
c. 11.2  
d. 12.1

## Box and Whisker Plots

Consider the following Basic Box & Whisker Plot.



What is the **Inner Quartile Range (IQR)** of the data set shown in the graph?

- a. 0  
b. 1  
c. 6  
d. 10

Outlier Formulas:

$$Q_1 - 1.5(IQR)$$

$$Q^3 + 1.5(IQR)$$

8.

20, 52, 86, 80, 44, 49, 57, 41, 44, 55

9.

67, 71, 79, 65, 52, 71, 73, 94, 69

Outliers : \_\_\_\_\_

Outliers : \_\_\_\_\_

10.

Consider the following unorganized data set:

12, 15, 8, 29, 30, 27, 19, 12

What is the **first quartile ( $Q_1$ )** of the data set?

- a. 8
- b. 12
- c. 17
- d. 28

11.

Consider the following unorganized data set:

12, 15, 8, 29, 30, 27, 19, 12

What is the **Inner Quartile Range (IQR)** of the data set?

- a. 12
- b. 16
- c. 17
- d. 28

## Frequency Table

12. Cameron surveys students in his school who play sports, and asks them which sport they prefer. He records the responses in the table below.

Gender	Preferred sport		
	Baseball	Soccer	Basketball
Male	49	52	16
Female	23	64	33

- What is the joint frequency of male students who prefer soccer? (How many male students prefer soccer?)
- What is the marginal frequency of each type of sport? (Total the number of males and females who played baseball. Then give total for the other two sports.)

13. The two-way table shows some information about the number of students in a school.

	Year Group			Total
	9	10	11	
Boys			125	407
Girls		123		
Total	303	256		831

Complete the two-way table.

14. Elizabeth wanted to know the gender and the hair color of each of her classmates. She arranged the results of this survey into a two-way table, shown below.

- According to the table, what is the joint frequency of boys with red hair?
- What is the marginal frequency of blonde hair?

	Brown	Blonde	Red	Total
Boys	5	2	3	10
Girls	7	6	4	17
Total	12	8	7	27

15.

1. a. You surveyed the members of your school club about the type of end of the year party they would like. Below is a two-way table for the results. Create a two-way table displaying all the relative frequencies.

	Males	Females	Total
Miniature Golf	8	4	
Skating	3	10	
Laser Tag	9	6	
Total			

	Males	Females	Total
Miniature Golf			
Skating			
Laser Tag			
Total			

- b. Using the above data, find the conditional probability of .....
- (i) those wanting laser tag, given that they are female.
  - (ii) those wanting miniature golf, given that they are male.
  - (iii) females, given that they want laser tag.
  - (iv) males, given that they want miniature golf.

### Correlation/Line of Best Fit

16. Which histogram below shows a data set that is **skewed right**?

