

**EXERCISE #1**  
**(Determining mean, median, mode)**

Calculate the mean, median, and mode (when appropriate) for each set of data. Sets D and E contain multiple data sets.

<u>Set A</u>	<u>Set B</u>	<u>Set C</u>
14, 18, 12, 18, 14, 25, 32, 18, 16	10,000 10,000 10,000 12,000 58,000	4 Hot Dogs  3 Steaks  13 Pizzas
Mean _____	Mean _____	Mean _____
Median _____	Median _____	Median _____
Mode _____	Mode _____	Mode _____

Set D

The most trouble-free 1991 car models sold in the USA

<u>Model / Base Price</u>	<u>Problems / 100 Cars</u>
1. Lexus LS400	\$39,000 47
2. Acura NSX	\$61,000 71
3. BMW 750iL	\$74,600 74
4. Lexus ES250	\$21,500 76
5. Mercedes-Benz S	\$63,600 77
6. Infiniti Q45	\$40,000 78
7. Pontiac 6000	\$12,999 78
8. Toyota Camry	\$12,198 79
9. Toyota Cressida	\$22,698 80
10. Honda CRX`	\$ 9,325 89
11. Mercedes-Benz 190E	\$28,050 89

*J.D. Power Associates Data. Extracted from Data Resource For Teaching Statistics, Dale Seymour Publications.*

Mean \_\_\_\_\_      Median \_\_\_\_\_      Mode \_\_\_\_\_

Set E

Chicken Nutrition

<u>Chicken Item</u>	<u>Weight</u>	<u>Calories</u>	<u>Fat (g)</u>
Hardee's Grilled Sandwich	192	310	9
Hardee's Fillet	173	370	13
Wendy's Grilled Sandwich	175	340	13
Wendy's Sandwich (Reg)	219	430	19
Burger King BK Broiler	168	379	18
McDonald's McChicken	187	415	20
McDonald's McNuggets (6)	113	270	15
Burger King Sandwich	229	685	40
KFC Lite 'n Crispy <sup>1</sup>	72	198	12
KFC Original Recipe <sup>1</sup>	92	248	15
KFC Extra Crispy <sup>1</sup>	108	324	21

<sup>1</sup>KFC figures average four kinds of chicken pieces: sidebreast, centerbreast, drumstick, and thigh.  
Extracted from *Data Resource For Teaching Statistics*, Dale Seymour Publications.

Mean \_\_\_\_\_

Median \_\_\_\_\_

Mode \_\_\_\_\_

## EXERCISE #2

**INSTRUCTIONS:** Based on the context of each problem, select and calculate the most appropriate measure of central tendency. Explain why this is the best measure to use.

1. The local Dress Rack store conducted an inventory of their sales to determine which sizes to order for the fall season. The following data represent the number of dresses sold this month by size.

Size	# Dresses Sold
4	8
6	23
8	12
10	35
12	3

Find the “average” size dress sold.

2. The Shoestring Postcard Company has ten employees. They need to hire 1 additional production worker and want to include the average annual salary in their help wanted advertisement. The following table lists the annual salaries of the current staff.

CEO	\$120,000
Vice Pres.	\$ 80,000
Production Workers	\$ 30,000
(By seniority)	\$ 28,000
	\$ 25,000
	\$ 20,000
	\$ 20,000
	\$ 15,000
	\$ 15,000
	\$ 10,000

Which measure of central tendency (average) would the CEO like to publish in his advertisement if he wants to appear to be paying well?

3. The Shoestring Postcard Company’s representative to the local Union of Printing Workers wants to insure that the average salary contained in the advertisement accurately reflects what the new employee can expect to earn. Which average does she want to see in the Help Wanted Ad?

### **EXERCISE #3**

Each of the three measures of central tendency we have discussed can correctly be called an average, and each has particular advantages or disadvantages in certain situations. Based on these properties of the Mean, Median, and Mode complete the following:

1. Describe a situation and provide a sample data set of at least 10 elements for which the **MEDIAN** is the most appropriate average.
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
2. Describe a situation and provide a sample data set of at least 10 elements for which the **MODE** is the most appropriate average.
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
3. Describe a situation and provide a sample data set of at least 10 elements for which the **MEAN** is the most appropriate average. Additionally, provide one reason why the mean is the most often used average.