At the Fair

Today you will complete an activity called At the Fair. You will be required to find the range, mode, median, and mean for sets of data. Take your time while working. You may have to refer to previous questions as you work your way through the unit.

Part I

The Newman City Fair attracts people from miles around. They come to eat the food, make new friends, and ride all of the exciting rides.

1. On the first day of the fair 20 people visited. On the second day 74 people visited. On the third day 102 people visited. What is the range of people who visited the fair over this three-day period?

2. The popcorn stand sells small cartons of popcorn. Each carton is worth 50 cents. The number of popcorn cartons that were sold on each of the three days is listed below. What is the average amount of money that the popcorn stand made from the three-day period? _____

1st day	10 Cartons	2nd Day	60 Cartons	3rd Day	80 Cartons

3. What is the median amount of small cartons of popcorn sold during the three-day period?

4. What is the mode amount of small cartons of popcorn sold during the three-day period?

5. What steps did you follow in order to answer problem #1?

At the Fair *(cont.)*

Part II

1. On the second day of the fair, the ferris wheel was very busy. Use the following information to calculate the mean number of ferris wheel riders.

7:00 P.M.	12 people
7:15 P.M.	25 people
7:30 P.M.	25 people
7:45 P.M.	22 people
8:00 P.M.	30 people

2. What is the mode for the number of people who rode the ferris wheel for the times that were listed in problem number one? _____

3. What is the median and range for the set of numbers that show the number of people who rode the Ferris Wheel on the second day of the fair? _____

Many of the people who came to the fair visited the hot dog stand. Each person who went to the hot dog stand spent one dollar on a hot dog and soda. Use the following information to calculate the amount of money the hot dog stand earned.

7:15 P.M.	10 people
7:30 P.M.	11 people
7:45 P.M.	13 people
8:00 P.M.	16 people

4. What is the range for the number of people who visited the hot dog stand? _____

_____

5. What is the range for the amount of money that the hotdog stand will earn during the times listed above? _____

Garden City Resort

At the Garden City Resort most of the guests are from far away. Many of the guests are families with small children. The resort employees do all that they can to make sure that the guests have a quiet and comfortable stay. The following questions indicate some of the things that the resort owners have to keep in mind when planning for the daily operation of the resort.

Part I

1. The Williams family decided to stay at the resort for 5 days. Two years ago when they took their vacation, they traveled 200 miles to reach their destination. Last year they traveled 150 miles. This year they had to travel 175 miles. What is the average number of miles that they traveled each year?

2. While at the Garden City Resort, the Williams family will participate in a number of activities. On Tuesday two family members paid a total of $70.00 for a tennis lesson. The two of them paid a total of $20.00 for a swimming lesson and a total of $39.00 for lunch at the arcade and game room. What is the average amount per activity that the two of them spent on Tuesday?

3. Kelly Williams bought an antique porcelain turtle at the gift shop. She paid $24.00 for the turtle. When she gets back home, she will add it to the other pieces in her porcelain collection. She will have three items in her porcelain collection. If the average price for the items in the collection is $28.00, how much did she pay for the other two items?

4. Mrs. Williams spent most of the five days on the beach. She spent 3 hours on the beach on the first day. On the other days she spent 3 hours, then 1 hour, then 4, and 4. What is the average number of hours that she spent at the beach each day?

Garden City Resort *(cont.)*

Part II

Most people who come to Garden City Resort want to see the sights.

1. In January the resort was visited by 200 people. In February and March they had an equal number of guests. Both months they received 150 guests. In April they had 250 guests. What was the median number of guests that the hotel had during this time?

2. Each guest who stays at the resort is given activity coupons that are of various values. The first day the Williams family was given three coupons. The values of the highest and lowest coupons are $10 and $14. The total value of the coupons is $36. What is the value of the median coupon?

3. The second day the family was given four theatre coupons. The highest and lowest coupons were worth $34 and $36. The total value of the four coupons is $140. What is the median value for these coupons?

4. On day three the family was given five coupons. The value of the coupons was $12, $10, $13, $8, and $7. What is the value of the median coupon?

5. On the last day of their trip the family was given seven coupons. Their total value of the coupons was $49. The highest and lowest values for the coupons were $4 and $10. What is the median value for all of the coupons?

6. What steps did you follow to solve problem #2?

Garden City Resort (cont.)

Part III

The cleaning staff at the resort has a long day. They prepare all of the towels and other room amenities. Sometimes it is easy for the manager to decide how many of each item to prepare. She most often prepares the number of each item that is needed. Sometimes, she looks at the mean number of items.

1. The towels were washed and folded, then delivered to all of the rooms. What is the mode for the number of rooms to which fresh towels were delivered? _____

Sunday	44	Tuesday	18
Monday	37	Wednesday	44

2. What is the median number of rooms that the staff had to prepare over the last week? The following list shows the number of rooms that were prepared each day. _____

Monday	30	Thursday	40
Tuesday	25	Friday	33
Wednesday	30		

3. What is the mode for the rooms that were prepared during the same week? _____

4. Over a five-day period 180 people visited the indoor swimming pool. The number of people who visited the pool over four of the days is listed below. How many people visited the pool on Wednesday if it was the median number? _____

Monday	31	Thursday	38
Tuesday	33	Friday	40
Wednesday	X		

5. Is there a mode for the following five-day period? If so, what is it? _____

Monday	42	Thursday	37
Tuesday	38	Friday	40
Wednesday	42		

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Garden City Resort *(cont.)*

Part IV

1. What is the range of values for these coupons?

Burger Heaven	$5.00 value
Long Distance Phone Calls	$8.00 value
Hot Wings to Go	$4.00 value

2. The following numbers represent the number of people who visited the arcade and game room on Wednesday afternoon. What is the range and median of the following numbers?
   15, 17, 19, 11, 31, 3, 8

3. What is the range and mean for the number of people who visited the restaurant on Tuesday morning?

7:00 A.M.	15 people	10:00 A.M.	29 people
8:00 A.M.	17 people	11:00 A.M.	34 people
9:00 A.M.	27 people	12:00 P.M.	52 people

4. The range for the number of towels washed and folded over a five-day period was 62. The range of towels prepared for the next five-day period was half of that number. What was the range for the second five-day period?

5. Explain how to calculate the range and mode of the following numbers. The numbers are 16, 18, 20, 20, 12, and 20.