Lesson 10-5

Mean Absolute Deviation

1. **Two driving schools use the same practice driver's test. Out of 100, School A had scores of 70, 79, 80, 82, and 95. School B had scores of 77, 83, 83, 81, and 82.**
   Find the mean absolute deviations. Then compare the variations.

Solution:

School A Marks out of 100	Absolute deviations	School B Marks out of 100	Absolute deviations
70		77	
79		83	
80		83	
82		81	
95		82	
Sum =			

Part A Find the means and the mean absolute deviations.

School A

Mean: _____

MAD: _____

School B

Mean: _____

MAD: _____

Part B Compare the variations.

The mean absolute deviation for School _____ is greater than that for School _____. This means the scores for School _____ are closer together and clustered around the mean. The scores for School _____ are more spread out and not as clustered around the mean.

2. **The table shows the height of waterslides at two different water parks.**

Height of Waterslides (ft)									
Splash Lagoon					Wild Water Bay				
75	95	80	110	88	120	108	94	135	128

Solution:

Splash Lagoon	Absolute deviations	Wild Water Bay	Absolute deviations
75		120	
95		108	
80		94	
110		135	
88		128	
Sum =			

Part A

The mean of Splash Lagoon = ——— =

The mean of Absolute deviations of Splash Lagoon = ——— =

The mean of Wild Water Bay = ——— =

The mean of Absolute deviations of Wild Water Bay = ——— =

Part B

Compare the Variations.

3. **The table shows the number of wins of two school baseball teams over the last five years. Find the mean absolute deviation for each team. Then compare the variations.**

	Number of Wins Per Season				
Bears	7	10	13	12	9
Saints	12	15	10	14	13

Bears	Absolute deviations	Saints	Absolute deviations
7		12	
10		15	
13		10	
12		14	
9		13	
Sum =			

Part A

The mean of Bears = ——— =

The mean of Absolute deviations of Bears= ——— =

The mean of Saints = ——— =

The mean of Absolute deviations of Saints = ——— =

Part B

Compare the Variations.

4. **The table shows the number of canned goods each homeroom collected over seven days. Find the mean absolute deviation. Then compare the variations. Round to the nearest hundredth, if necessary.**

	Number of Canned Goods Collected						
Room 101	57	52	40	42	37	54	47
Room 102	51	17	42	40	46	74	31

Room 101	Absolute deviations	Room 102	Absolute deviations
57		51	
53		71	
40		42	
42		40	
37		46	
54		74	
47		31	
Sum =			

Part A

The mean of Room 101 = ——— =

The mean of Absolute deviations of Room 101= ——— =

The mean of Room 102 = ——— =

The mean of Absolute deviations of Room 102 = ——— =

Part B

Compare the Variations.