**Question 3: (1 point)**

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| The Carbondale Hospital is considering the purchase of a new ambulance. The decision will rest partly on the anticipated mileage to be driven next year. The miles driven during the past 5 years are as follows.

|  |  |
| --- | --- |
|  |  |
| **Year**  | **Mileage**  |
|  |  |
| 1 | 3,100 |
| 2 | 4,000 |
| 3 | 3,500 |
| 4 | 4,000 |
| 5 | 3,700 |
|  |  |
|  |  |

 |
| **(a)**  | Forecast the mileage for next year using a 2-year moving average. \_\_\_\_\_\_\_\_\_\_\_\_ *Round your answer to the nearest whole number; for example,* 1234 . |
| **(b)**  | Find the MAD for your forecast in part (a). \_\_\_\_\_\_\_\_\_\_\_\_ *Round your answer to the nearest whole number; for example,* 123 . |
| **(c)**  | Use a weighted 2-year moving average with weights of .4 and .6 to forecast next year’s mileage. (The weight of .6 is for the most recent year.) \_\_\_\_\_\_\_\_\_\_\_\_ *Round your answer to the nearest whole number; for example,* 1234 . What is the MAD of this forecast? \_\_\_\_\_\_\_\_\_\_\_\_ *Round your answer to the nearest whole number; for example,* 123 . |
| **(d)**  | Compute the forecast for year 6 using exponential smoothing, an initial forecast for year 1 of 3,100 miles, and http://phga.pearsoncmg.com/phga2/tmp/ca/fk/hh/joggaeldndhogeljbnhoboknpl.png \_\_\_\_\_\_\_\_\_\_\_\_ *Round your answer to the nearest whole number; for example,* 1234 . |