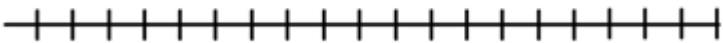


Name: _____

Date: _____

Use the following to review for you test. Work the Practice Problems on a separate sheet of paper.

What you need to know & be able to do	Things to remember	Problem	Problem
Central Tendency	<ul style="list-style-type: none"> • Mean • Median • Mode 	1. 36, 39, 58, 42, 106, 39, 48, 45	2. 50, 55, 60, 58, 62, 57, 68, 51, 63
Measures of Spread	<ul style="list-style-type: none"> • Q1 • Q3 • IQR • Minimum • Maximum • Range • MAD 	3. (Use the same #s from 1)	4. (Use the same #s from 2)
Box-and-Whisker Plot and Outliers	<ul style="list-style-type: none"> • First dot: Min • First Line: Q1 • Middle Line: Median • Third Line: Q3 • Last dot: Max • Outlier: Q1 – 1.5(IQR) Q3 + 1.5(IQR) 	<p>5. Using the data from #1 & 3, construct a box and whisker plot.</p>  <p>6. Are there any outliers? Show your work!</p>	
Correlation vs. Causation	<ul style="list-style-type: none"> • Positive: Both items are increasing/decreasing • Negative: one item increases as the other decreases • No Correlation: No relationship • Causation: One item causes the other. 	7. Practicing Free Throws vs. Free Throw Percentage	8. Colors of the Sky vs. Time of Day
		9. Weight vs. Amount of Exercise	10. Number of Followers on Twitter vs. Number of Friends on Facebook

<p>Linear Regression</p>	<ul style="list-style-type: none"> • $y = ax + b$ • r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 good fit.) 	<p>11. Determine the line of best fit. Is this model a good fit for the data?</p> <table border="1" data-bbox="727 233 1536 302"> <tr> <td>Price</td> <td>4.00</td> <td>5.50</td> <td>3.50</td> <td>8.00</td> <td>5.50</td> <td>7.00</td> </tr> <tr> <td># of Sandwiches</td> <td>68</td> <td>55</td> <td>85</td> <td>22</td> <td>64</td> <td>28</td> </tr> </table>	Price	4.00	5.50	3.50	8.00	5.50	7.00	# of Sandwiches	68	55	85	22	64	28
Price	4.00	5.50	3.50	8.00	5.50	7.00										
# of Sandwiches	68	55	85	22	64	28										
<p>Quadratic Regression</p>	<p>Data Data 4 (clear)</p> <p>Type in new data</p> <p>2nd Data Quadratic Reg</p> <p>Change to YES</p> <p>Write your equation in Standard Form</p> <p>To PREDICT values use f(on the TABLE button</p>	<p>The amount of medication in a patient’s bloodstream varies over time. The table below shows the concentration of a certain medication in milligrams per liter at various time intervals after being administered.</p> <table border="1" data-bbox="675 674 1472 795"> <tr> <td>Time (minutes)</td> <td>0</td> <td>30</td> <td>60</td> <td>90</td> <td>120</td> <td>150</td> </tr> <tr> <td>Concentration (mg/L)</td> <td>0</td> <td>39.0</td> <td>49.9</td> <td>42.3</td> <td>25.0</td> <td>7.78</td> </tr> </table> <p>15. What is the quadratic regression model? Write in Standard Form and round to 4 decimal places.</p> <p>16. Predict the concentration of the medicine at 12 hours (720 minutes).</p>	Time (minutes)	0	30	60	90	120	150	Concentration (mg/L)	0	39.0	49.9	42.3	25.0	7.78
Time (minutes)	0	30	60	90	120	150										
Concentration (mg/L)	0	39.0	49.9	42.3	25.0	7.78										
<p>Exponential Regression</p>	<ul style="list-style-type: none"> • $y = a(b)^x$ • r = correlation coefficient (if close to 0 bad fit; if close to 1 or -1 then good fit.) 	<p>12. Determine the exponential regression model. Is this model a good fit for the data?</p> <table border="1" data-bbox="727 1262 1344 1331"> <tr> <td>Year</td> <td>0</td> <td>2</td> <td>4</td> <td>7</td> </tr> <tr> <td>Revenue</td> <td>3</td> <td>4</td> <td>11</td> <td>25</td> </tr> </table>	Year	0	2	4	7	Revenue	3	4	11	25				
Year	0	2	4	7												
Revenue	3	4	11	25												