Unit 4 Discussion Example – Peer Reply 1

Peer Reply 1: Read a classmate's response. Consider investing in your classmate's stock and assume that the daily change is normally distributed. Using the Normal Distribution Excel template found in Unit 4 LiveBinder, your classmate's mean and standard deviation, determine the probability for the daily change of this stock to have:

1. A decrease of 0.5 point or more ($X \leq -0.5$)?
2. An increase of more than 0.5 point ($X > 0.5$)?
3. A decrease of 1 point or more ($X \leq -1$)?
4. An increase of more than 1 point ($X > 1$)?

In your own words, explain if these are high or low likelihoods for change.

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I will review the Crocs, Inc daily stock change. Using the mean = 0.092258065 and standard deviation of 0.253583775 and using the Excel templates for this unit:

1) P ($X \leq -0.5$) = 0.0098 = 0.98%

2) P ($X > 0.5$) = 0.0539 = 5.39%

3) P ($X \leq -1$) = 0.00 = 0%

4) P ($X > 1$) = 0.0002 = 0.02%

n a given x	
x	-0.5
z score	-2.3356
P(value is < x)	0.0098

an a given x	
x	0.5
z score	1.6079
P(value is > x)	0.0539

n a given x	
x	-1
z score	-4.3073
P(value is < x)	0.0000

an a given x	
x	1
z score	3.5797
P(value is > x)	0.0002

Comparing the decrease or increase of 0.5 points or more, it is more likely to increase (5.39%) than to decrease (0.98%).

Comparing the decrease or increase of 1 point or more, it is more likely to increase however; it is a very low likelihood that the stock would change 1 point (only 0.02%)!