

Unit 3 Discussion Example - First Response to Classmates' Post

First response: Read a classmate's response. Consider investing in your classmate's stock and assume that the daily change is normally distributed. Using Normal.xlsx, 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 more 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.

I will review the Crocs, Inc daily stock change. Using the mean = 0.094 and standard deviation of 0.14378865 and Normal.xlsx:

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

Common Data		Common Data	
Mean	0.0922581	Mean	0.0922581
Standard Deviation	0.2535838	Standard Deviation	0.2535838
Probability for X <=		Probability for X <=	
X Value	-0.5	X Value	-1
Z Value	-2.335552	Z Value	-4.307287
P(X<=-0.5)	0.0098	P(X<=-1)	0.0000
Probability for X >		Probability for X >	
X Value	0.5	X Value	1
Z Value	1.6079181	Z Value	3.5796531
P(X>0.5)	0.0539	P(X>1)	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%).