



Lesson 3: Are You Normal?

Many people strive to fit in with the crowd and be normal. Other people try to stand out and deviate from everyone else. Can you determine how to measure deviance?

Doing the Science

1. Start the Stats Entertainment Simulation by clicking on the “Sim” tab.
2. Click the “Cash Grab” icon. In this part of the simulation you’ll have six chances to grab as much cash as possible from the cash booth.
3. To begin, click the green “Start” button to activate the cash booth. Once the booth begins to operate, click the “Grab” button to capture cash. Continue collecting cash using the “Grab” button until time runs out.
4. Note and record in Table 1 the amount of money you grabbed for Try #1.
5. Repeat steps 3 – 4 for a total of six cash grabs. Make sure to record your data in Table 1.
6. After you have complete all six attempts, click the green “Calculate” button located at the bottom left-hand corner of the screen.
7. Note all of the values presented in the on-screen table and record these values in their appropriate locations in Table 1.
8. Use the on-screen formulas to help you calculate the variance (V) and standard deviation (SD). Record these values in Table 1.

Table 1. Total Cash Grabbed

Try #	Total Cash Grabbed (\$)	Deviation (D)	D ²
1			
2			
3			
4			
5			
6			
Average (A) =		Σ D² =	
Variance (V) =			
Standard Deviation (SD) =			

Do You Understand?

1. What would happen to the values of the variance and the standard deviation if a seventh try was made at the cash grab and the grab resulted in ten times more money than the average amount grabbed in the previous six rounds?