

Quick Assessment on Your Knowledge of Variation

The following six people were selected and trained to perform a specific series of tasks over a period of four days.

They were provided the same amount of training, given the same equipment and materials to perform the tasks, were provided comfortable working conditions and were adequately supervised.

You want to recognize and encourage the top performers (the lower the number the better) with the intent of maintaining and improving performance. Below are the results.

Name	Day 1	Day 2	Day 3	Day 4	Total	Grade	Stoplight
John	14	10	9	10	43	F	Red
Pat	17	5	8	5	35	B	Yellow
Mary	11	6	5	9	31	A	Green
Steve	8	8	9	6	31	A	Green
Karen	12	11	12	8	43	F	Red
Dave	9	11	7	10	37	C	Yellow

If this process represented the cumulative results of wrong answers on a daily 50 question test in school and the teacher was grading on the curve, the distribution of grades would be: 30-32 = A, 33-35 = B, 36-38 = C, 39-41 = D and 42-44=F. A column that provides status by color-codes is also provided to help assess performance.

Who would you select as the top performer (s) ?

Correct Answer?

The correct answer is that based on the results, there is no significant difference between the people performing the tasks, or in other words, there are no top performers. The variation in their performance is normal or common. Taking action, such as recognizing "top performers" will usually make things worse and not better and tends to reinforce the status quo.

Since the outcomes from the process represent common cause variation, the process is stable or predictable. *In other words, if you always do what you always did, on average, you will usually get what you always got.* Stable does not

necessarily mean good, it just means that given all of the variables, results from the process are predictable. If you want to improve the result, improve the system.

This example was based on by Dr. Deming's Red Bead Experiment. For a supporting perspective and additional information, see <http://www.maaw.info/DemingsRedbeads.htm>.