

## Answer on Question #81619 – Math – Statistics and Probability

### Question

1. Given a random sample from a distribution, the variance of the sample mean ( $V_1$ ) and the variance of the original distribution ( $V_2$ ) have the following relationship:

$$V_1 < V_2$$

$$V_1 = V_2$$

$$V_1 > V_2$$

$V_1$  and  $V_2$  are not related in any way

### Solution

$$V_1 = \frac{V_2}{\sqrt{n}}$$

So,  $V_1 < V_2$ .

**Answer:**  $V_1 < V_2$ .