Sample Mean and the Sample Error for the Mean (a.k.a. SEM)

Standard Error of the Mean (SEM)–The standard error of the mean [ ] the [ ] between [ ] means (that you would obtain if you took [ ] [ ] from the [ ] population.)

- The standard error of the mean [ ] the variability [ ] [ ] whereas the standard deviation [ ] the variability within a [ ] sample.

$$SEM = \frac{\square}{\square}$$

s = [ ] [ ] [ ]

n = [ ] [ ]

- If the standard error of the mean is [ ], or close to [ ], then the sample mean is [ ] to be a [ ] [ ] of the population [ ].
- It is also important to note that the standard error of the mean will [ ] when the standard deviation [ ] and the sample size [ ].

The manager of a car dealership would like to determine the average years of ownership for a new vehicle. He found that a sample of 25 customers who bought new vehicles owned that vehicle for 7.8 years, with a standard deviation of 2.5 years. What is the standard error for this sample mean?

s= [ ]

n= [ ]

$\bar{x}$ = [ ]

Sample Mean

$$SEM = \frac{s}{\sqrt{n}}$$

$$SEM = \frac{\square}{\sqrt{\square}} = 0.5$$

The true mean is [ ] years to the left and [ ] years to the right of the sample mean.