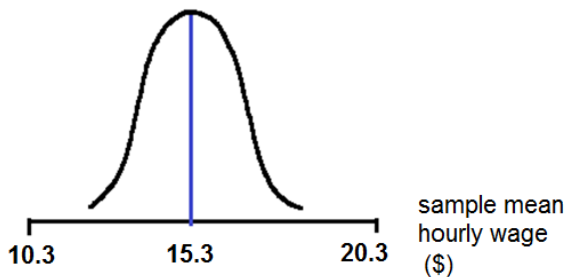
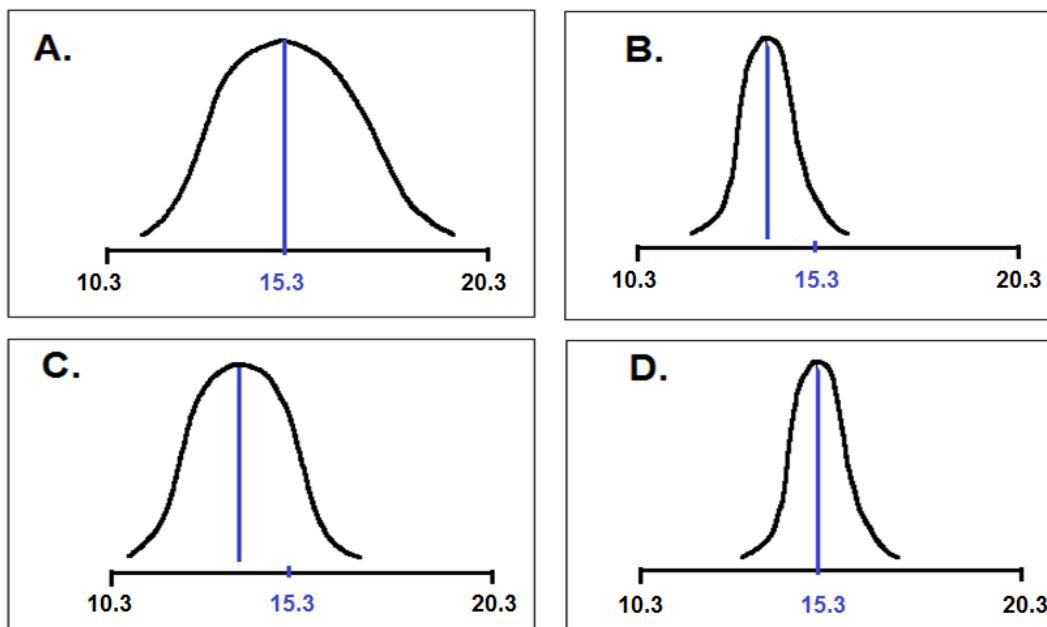


**Topic: Sampling distributions of means – sample clicker question**

The sampling distribution of the average hourly wages of random samples of 120 employees in a large company is shown below.



If the averages are computed based on samples of size larger than 120, we would expect the sampling distribution of the average hourly wage to look like:



**Answer: D**

**Explanation:** *Since the mean of a sampling distribution equals the population mean regardless of the sample size, one can deduce that the population mean hourly wage is \$15.3 from the given graph. We also know that the SD of the average hourly wage of  $n$  employees is given by the population SD divided by  $\sqrt{n}$ . The larger the value of  $n$ , the smaller the SD of the sample average hourly wage will be. Therefore, we expect that the sampling distribution for  $n > 120$  will have the same center (\$15.3) but a smaller spread than that for  $n = 120$ .*