1. A data professional is analyzing data about a population of aspen trees. They take
   repeated random samples of 10 trees from the population and compute the mean
   height for each sample. Which of the following statements best describes the
   sampling distribution of the mean?

      1 / 1 point

   ○ The sampling distribution of the mean is the sum of all the sample means.

   ○ The sampling distribution of the mean is the maximum value of all the sample
   means.

   ○ The average value of all the sample means.

   ◉ The probability distribution of all the sample means

   ✓ Correct
   The sampling distribution of the mean is the probability distribution of all the
   sample means. A probability distribution represents the possible outcomes of a
   random variable.

2. The central limit theorem implies which of the following statements? Select all that
   apply.

      0.5 / 1 point

   ☑ The sampling distribution of the mean approaches a normal distribution as the
   sample size decreases.

   ✗ This should not be selected
   The central limit theorem states that the sampling distribution of the mean
   approaches a normal distribution as the sample size increases. If a large enough
   sample of the population is taken, the sample mean will be roughly equal to the
   population mean.

   ☑ If you take a large enough sample of the population, the sample mean will be
   roughly equal to the population mean.

   ✓ Correct
   The central limit theorem states that the sampling distribution of the mean
   approaches a normal distribution as the sample size increases. If a large enough
   sample of the population is taken, the sample mean will be roughly equal to the
   population mean.

   ☐ The sampling distribution of the mean approaches a normal distribution as the
   sample size increases.

   ☐ If you take a small enough sample of the population, the sample mean will be
   roughly equal to the population mean.

3. What is a standard error?

      1 / 1 point

   ◉ The standard deviation of a sample statistic

   ○ An estimate of a population parameter

   ○ A list of all the items in the target population.

○ The probability distribution of a sample statistic

✓ Correct
A standard error is the standard deviation of a sample statistic.