To determine which graph represents the distribution of 500 sample means from random samples each of size 9, we need to consider the Central Limit Theorem (CLT). The CLT states that the distribution of the sample mean will approximate a normal distribution as the sample size increases, with the following properties:

1. \*\*Mean of the sample means (\(\bar{x}\))\*\*: This will be equal to the population mean (\(\mu\)). Here, \(\mu = 6.4\).

2. \*\*Standard Deviation of the sample means (Standard Error, SE)\*\*: This will be the population standard deviation divided by the square root of the sample size (\(\sigma / \sqrt{n}\)). Here, \(\sigma = 4.1\) and \(n = 9\), so \(SE = \frac{4.1}{\sqrt{9}} = \frac{4.1}{3} = 1.3667\).

Given this information, we expect the distribution of the sample means to be:

- Centered around 6.4.

- Much narrower than the population distribution because the standard error (1.3667) is significantly smaller than the population standard deviation (4.1).

Now, let's analyze the graphs:

- \*\*Graph A\*\*: This graph is spread out and does not appear to be centered around 6.4. It also seems too wide to represent the distribution of sample means with a standard error of 1.3667.

- \*\*Graph B\*\*: This graph is very narrow and centered around a value that is not close to 6.4. It does not fit our expectations.

- \*\*Graph C\*\*: This graph is centered around 6.4 and is narrower than the population distribution, which is consistent with the reduced variability expected from the standard error of 1.3667.

Based on this analysis, the correct choice is:

\*\*(C) Graph C\*\*