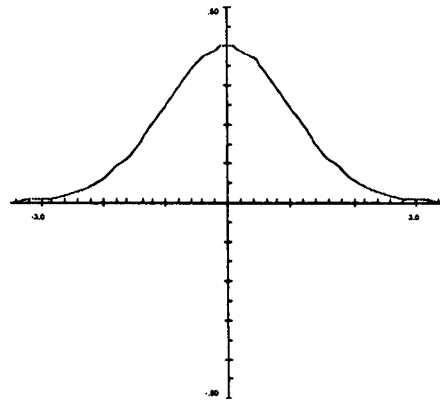


At the bakery where you work, loaves of bread are supposed to weigh 1 pound, with standard deviation  $\sigma = 0.13$  pounds. You believe that new personnel are producing loaves that are heavier than 1 pound. As supervisor of Quality Control, you want to test your hypotheses at the 5% significance level. You weigh 20 loaves and obtain a mean weight of 1.05 pounds.

1. Identify the population and parameter of interest. State your null and alternative hypotheses.
2. Identify the statistical procedure you should use. Then state and verify the conditions required for using this procedure.
3. Calculate the test statistic and the  $P$ -value. Illustrate using the



graph provided.

4. State your conclusions clearly in complete sentences.