## Quiz 4

A company that makes cola drinks states that the mean caffeine content per one 12 -ounce bottle of cola is 35 milligrams. You work as a quality control manager and are asked to test this claim.
During your tests, you find that a random sample of 30 bottles of cola (12-ounce) has a mean caffeine content of 34.2 milligrams. From a previous study, you know that the standard deviation of the population is $\sigma=7.5$ milligrams. We assume that the caffeine content is normally distributed.
At $\alpha=5 \%$ level of significant, can you reject the company's claim? What is the P-value associated with the test?

