Quiz 9.3A AP Statistics Name:

1. The Environmental Protection Agency has determined that safe drinking water should contain no more than 1.3 mg/liter of copper. You are testing water from a new source, and take 30 water samples. The mean copper content in your samples is 1.36 mg/l and the standard deviation is 0.18 mg/l. There do not appear to be any outliers in your data.

(a) Do these samples provide convincing evidence at the $\alpha = 0.05$ level that the water from this source contains unsafe levels of copper? Justify your answer.

(b) How would your conclusion change if your sample mean had been 1.355 mg/l? What point does this make about statistical significance?