Week 5 Discussion 1: Population Standard Deviation. Participate in class discussion by responding to the following prompt (250 to 450 words). To receive full credit for the discussion, you must post a thoughtful response to the prompt and post at least one response to a classmate’s post. Be sure to use proper APA citations and references in your posts and replies. In order to use hypothesis testing and estimation for statistical inference, you must know the population standard deviation in advance. However, this condition is often unrealistic in actual practice. Select two or three health-related issues that have population-wide ramifications but assume the population standard deviation is not known. Discuss how you would approach collecting and analyzing data to make accurate generalizations about the population as a whole. For each scenario you selected, describe the validity of making statistically significant inferences from your sample data when the population standard deviation is known versus not known. In each case, how does the size of the samples affect the outcomes? Time permitting, conduct Internet research about similar real-life studies to support your conclusions.