Name: _____

A few weekends ago, we invited some friends over and served them lunch. The day before, we had bought some cans of soda, but we didn't have enough room in the refrigerator to cool the colas. Since it was February, we decided to leave the cans outside overnight to cool.

The overnight temperature was to be in the twenties, but I was afraid the cola might freeze. However, I figured out a way to approximate the temperature of the cola at any given time.

First, I read the thermometer in the house. It said 72˚F. Next, I read our outdoor thermometer and it read 25˚ F. I put the cola outside for 30 minutes, then brought one of the cans inside to hve a drink. Before I drank the cola, I measured the temperature. The soda's temperature was 60˚ F.

Based on this information, how long would it take for the cola to cool to 35˚ F ? Assume that the outdoor temperature remains constant during the cooling process.

Newton's law of cooling states that a hot object cools at a rate proportional to the difference between its temperature and that of its environment.