Problem statement A small object of unknown temperature was placed in a large room that had the fixed temperature $30°$ C. After 10 minutes, the object's temperature is $-10°$ C, and after an additional 10 minutes, the object's temperature was $-5°$ C. What was the initial temperature of the object? (Assume that the temperature obeys Newton's law of cooling: the rate of change of the temperature of the object is proportional to the difference in temperature between the object and the constant room temperature.)