Change in Temperature = f(time)

Forensic experts and medical examiners have collected lots of data on the temperature change in human body after death. Here is a sample of that data. One hour after death the body has retained 94% of the difference between its original temperature, normally 37° C, and the temperature of its surroundings. After 2 hours 88%; 3, 83%; 4, 78%; 5, 73%; 6, 69%; 7, 64%; 8, 60%; 9, 57%; 10, 53% and after 11 hours, 50%. Imagine you're a medical examiner who has just been called to a scene where a murder victim's body has been placed in a freezer at 0° C. Model body temperature (not percent of body temperature) as a function of time. Extrapolate to estimate body temperature after 18 hours. Use the inverse function to estimate how long ago a murder was committed if the body temperature is 9° C.

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