Change in Temperature = f(time)

Let's try to create another temperature model. Forensic experts and medical examiners know that the human body, after death, loses or gains about 6.106%/hour of the difference between normal body temperature, 98.6° F, and the temperature of the surrounding air. 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 sauna at 160° F. Model body temperature as a function of time. Extrapolate to estimate body temperature after 18 hours. Use the inverse function to estimate how long ago the murder was committed if the body temperature is 142.5° F.

Note: You will want to use the fraction of heat the body retains not loses. You will want to use either the form difference – difference*fraction^t or the form difference * (1 – fraction^t) and to be sure to add 98.6° F that is the temperature of the body at death.

