

Estimating Time of Death Prior to Twelve Hours

Please answer the following Algor questions. Make sure to show your work. Use text pages 328-329.

Things we know:

- Average body temperature is 36°C
- For the first twelve hours the human body losses heat at a rate of $0.78^{\circ}\text{C}/\text{hour}$
- For the first twelve hours the total body heat loss is 9.36°C
- **Change in Temperature = $(0.78^{\circ}\text{C}/\text{hour}) \times \text{ETOD}$**
- **ETOD=**

1. What is the temperature loss for someone who has been dead for 12 hours?
2. How do you know that a victim with a body core temp of 28°C has been dead for LESS than 12 hours?
3. Approximately how long has the victim been dead (ETOD) if the body temperature was 36°C ?
4. Approximately how long has the victim been dead (ETOD) if the body temperature was 35°C ?
5. Approximately how long has the victim been dead (ETOD) if the body temperature was 33.1°C ?
6. Approximately how long has the victim been dead (ETOD) if the body temperature was 30°C ?
7. Approximately how long has the victim been dead (ETOD) if the body temperature was 28.5°C ?
8. What can you tell from a body that as a body temperature of 24°C ? Way can you no longer use the same rate of $0.78^{\circ}\text{C}/\text{hour}$?