



a)

$$x = 0$$

$$T_S = -15\text{ °C}$$

$$x = 0,50\text{ m}$$

$$T(t?) = 0\text{ °C}$$

$$\frac{T - T_S}{T_i - T_S} = \text{erf}(\eta)$$

$$\frac{0 - (-15)}{10 - (-15)} = \text{erf}(\eta)$$

$$\eta = 0,595$$

$$\eta = \frac{x}{\sqrt{4 \cdot \alpha \cdot t}}$$

$$t = 14,8\text{ dias}$$

b)

$$x = 0$$

$$T_S = -15\text{ °C}$$

$$x = 0,50\text{ m}$$

$$T(7,4\text{ dias}) = ?$$

$$\frac{T - T_S}{T_i - T_S} = \text{erf}(\eta)$$

$$\eta = \frac{x}{\sqrt{4 \cdot \alpha \cdot t}}$$

$$\frac{T - (-15)}{10 - (-15)} = \text{erf}(0,8412)$$

$$T = 4,1\text{ °C}$$