

## Escalas Termométricas - Lista 2

$$\textcircled{1} \text{ a) } \frac{\Theta_C}{5} = \frac{\Theta_F - 32}{9}$$

$$\frac{-62,8^\circ}{5} = \frac{\Theta_F - 32}{9}$$

$$\Theta_F = \frac{9 \times (-62,8)}{5} + 32 \Rightarrow \Theta_F = 81,0^\circ \text{F}$$

b)

$$\frac{56,7^\circ}{5} = \frac{\Theta_F - 32}{9}$$

$$\Theta_F = \frac{9 \times 56,7}{5} + 32 \Rightarrow \Theta_F = 134,1^\circ \text{F}$$

$$\text{c) } \frac{31,1^\circ}{5} = \frac{\Theta_F - 32}{9}$$

$$\Theta_F = \frac{9 \times 31,1}{5} + 32 \Rightarrow \Theta_F = 88,0^\circ \text{F}$$

$$\textcircled{2} \quad \frac{\Theta_C}{5} = \frac{\Theta_F - 32}{9}$$

$$\text{a) } \frac{\Theta_C}{5} = \frac{41 - 32}{9} \Rightarrow \Theta_C = \frac{9}{5} \cdot 9 \Rightarrow \Theta_C = 9^\circ\text{C}$$

$$\text{b) } \frac{\Theta_C}{5} = \frac{107,0 - 32}{9} \Rightarrow \Theta_C = 41,7^\circ\text{C}$$

$$\text{c) } \frac{\Theta_C}{5} = \frac{-18,0 - 32}{9} \Rightarrow \Theta_C = -27,8^\circ\text{C}$$

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$$\textcircled{3} \quad \frac{18}{5} = \frac{\Theta_F - 32}{9} \Rightarrow \Theta_F = 64,4^\circ\text{F}$$

$$\frac{39}{5} = \frac{\Theta_F - 32}{9} \Rightarrow \Theta_F = 102,2^\circ\text{F}$$

$$\Delta\Theta_F = 102,2 - 64,4 \Rightarrow \Delta\Theta_F = 37,8^\circ\text{F}$$

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$$\textcircled{4} \quad 1\text{K} = 1^\circ\text{C} = \frac{9}{5}^\circ\text{F}$$

$$10\text{K} = 10 \cdot \frac{9}{5}^\circ\text{F} \therefore 10\text{K} = 18^\circ\text{F}$$

B aumento de 10K = 18°F (A aumento apenas 10°F)

⑤ a)  $1\text{K} = \frac{9}{5}^{\circ}\text{F} \Rightarrow 10\text{K} = \frac{10 \cdot 9}{5}^{\circ}\text{F}$

$10\text{K} = 18^{\circ}\text{F} \therefore \Delta^{\circ}\text{F} = -18^{\circ}\text{F}$

b)  $1\text{K} = 1^{\circ}\text{C} \therefore \Delta^{\circ}\text{C} = -10^{\circ}\text{C}$

⑥  $\frac{\Theta_c}{5} = \frac{\Theta_F - 32}{9}$

a)  $\frac{\Theta_c}{5} = \frac{-4 - 32}{9} \Rightarrow \Theta_c = -20^{\circ}\text{C}$

$\frac{\Theta_c}{5} = \frac{45 - 32}{9} \Rightarrow \Theta_c = 7,2^{\circ}\text{C}$

$\Delta\Theta_c = 7,2 - (-20)$

$\Delta\Theta_c = 27,2^{\circ}\text{C}$

b)  $\frac{\Theta_c}{5} = \frac{44 - 32}{9} \Rightarrow \Theta_c = 6,7^{\circ}\text{C}$

$\frac{\Theta_c}{5} = \frac{-56 - 32}{9} \Rightarrow \Theta_c = -48,9^{\circ}\text{C}$

$\Delta\Theta_c = -48,9 - 6,7$

$\Delta\Theta_c = -55,6^{\circ}\text{C}$

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$$\textcircled{7} \quad \frac{\Theta_C}{5} = \frac{\Theta_F - 32}{9}$$

$$a) \quad \frac{\Theta_C}{5} = \frac{104,4 - 32}{9} \Rightarrow \Theta_C = 40,2^\circ\text{C}$$

$\rightarrow$  Sim; temperatura indica febre

$$b) \quad \frac{12}{5} = \frac{\Theta_F - 32}{9} \Rightarrow \Theta_F = 53,6^\circ\text{F}$$