

## Gabarito Lista 2 - Temperatura

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1. (a)  $Ra = \frac{9}{5}C + 491,67$ ;  
(b) Mostre!  
(c) Mostre!
2. (a)  $y = \frac{L}{2}\sqrt{2\alpha\Delta T}$ ;  
(b)  $y = 2,74$  m.
3. (a)  $R = \frac{d(1 + \alpha_i\Delta T)}{(\alpha_c - \alpha_i)\Delta T}$ ;  
(b)  $\theta = \frac{L}{d}(\alpha_c - \alpha_i)\Delta T$ ;  
(c)  $h = L\sqrt{2\alpha_c\Delta T}$ .  
(d)  $R = 3,1$  m,  $\theta = 0.032$ ,  $h = 1.84$  mm.
4. (a) Mostre!  
(b)  $\Delta A = 16\alpha(lw)\Delta T$ .  
(c) expansão.
5.  $h = \frac{V(\gamma - 3\alpha)\Delta T}{A(1 + 2\alpha\Delta T)}$ .
6. (a) Mostre!  
(b)  $\gamma = 0.00005$  °C<sup>-1</sup>.  
(c)  $\gamma = -0.000025$  °C<sup>-1</sup>.  
(d) dilatação normal e dilatação anômala, respectivamente.
7. (a)  $M/m = 19$ .  
(b)  $T = 5,7$ °C.