$$2R_A \; + \; 2R_B \quad = \quad (t_4 - t_1) * (v_A + v_B)$$

$$2R_A \; - \; 2R_B \quad = \quad (t_3 - t_2) * (v_A + v_B)$$

$$\text{circumference C} \quad = \quad v * P \quad = \quad 2\pi r$$

$$\frac{v_A}{v_B} \quad = \quad \frac{m_B}{m_A}$$

$$B_{tot} \quad = \quad 4\pi R_A^2 \sigma T_A^4 \; + \; 4\pi R_B^2 \sigma T_B^4$$

$$B_{sec} \quad = \quad 4\pi R_A^2 \sigma T_A^4$$

$$B_{pri} \quad = \quad 4\pi (R_A^2 - R_B^2) \sigma T_A^4 \; + \; 4\pi R_B^2 \sigma T_B^4$$

$$B_{tot} \; - \; B_{pri} \quad = \quad 4\pi \sigma R_B^2 T_A^4$$

$$B_{tot} \; - \; B_{sec} \quad = \quad 4\pi \sigma R_B^2 T_B^4$$

$$\frac{B_{tot} \; - \; B_{pri}}{B_{tot} \; - \; B_{sec}} \quad = \quad \left(\frac{T_A}{T_B} \right)^4$$

$$L \quad = \quad 4\pi R_A^2 \sigma T_A^4 \; + \; 4\pi R_B^2 \sigma T_B^4$$