$R(s) = 0$

$$\frac{T_i(s)}{T_a(s)} = \frac{\frac{1}{1000s+1}}{1 + 2\left(\frac{1}{1000s+1}\right)} = \frac{1}{1000s + 1 + 2} = \frac{1}{1000s + 3}$$