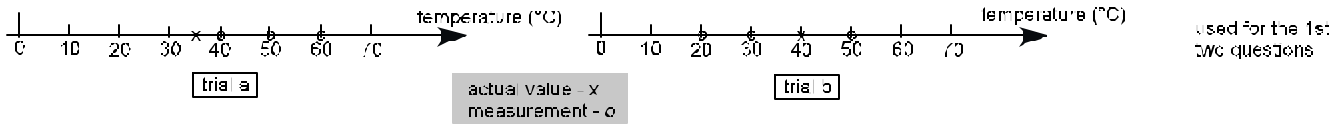
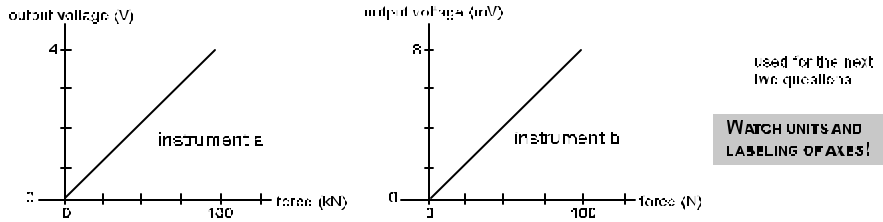


Mark **each** true/false question either **T** OR **F** (1pt each)



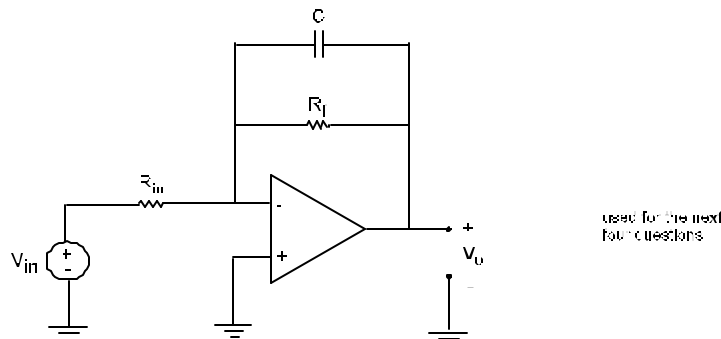
- ___ Trial **b** displays greater bias error than trial **a**.
- ___ Trial **b** displays a greater range of precision error than trial **a**.



- ___ Instrument **a** is more sensitive than instrument **b**.

Why or why not? _____

- ___ Instrument **b** has greater range than instrument **a**.



- ___ Time-domain response. Increasing C will lower the magnitude of the static gain coefficient.
- ___ Time-domain response. Increasing R_f will increase the time constant.
- ___ Frequency-domain response. Lowering R_{in} will lower the break frequency.
- ___ Frequency-domain response. Increasing R_f will increase magnitude of the DC gain.

Answer the last two questions given that two systems (1 and 2) have the same transfer function

$$TF(s) = \frac{V_o(s)}{V_{in}(s)} = \frac{1000}{s + 20}$$

- ___ If $v_{in-1} = 5 \cos(10t)$ V and $v_{in-2} = 50 \cos(100t)$ V, the amplitude of v_{out-1} will be greater than v_{out-2} .
Why or why not? _____

- ___ If $v_{in-1} = 1000 \cos(10^4 t)$ V and $v_{in-2} = 10 \cos(500t)$ V, the amplitude of v_{out-2} is greater than v_{out-1} .
Why or why not? _____