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

____ (*numeric*) A linear force transducer has an output of 20 mV when measuring 100 N and has an out of 100 mV when measuring 300 N. What is the zero offset error in mV?

____ (*numeric*) A linear displacement transducer reads 0 mm when measuring 0 mm and reads 110 mm when measuring 100 mm. What is the actual displacement when the transducer reads 385 mm?
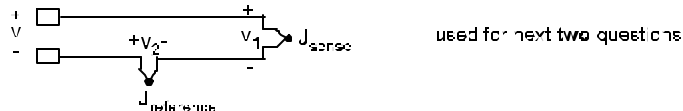
____ Suppose $J_{reference}$<0°C.   The voltage v in the diagram above will indicate a higher temperature at the sensing junction than is actually there.
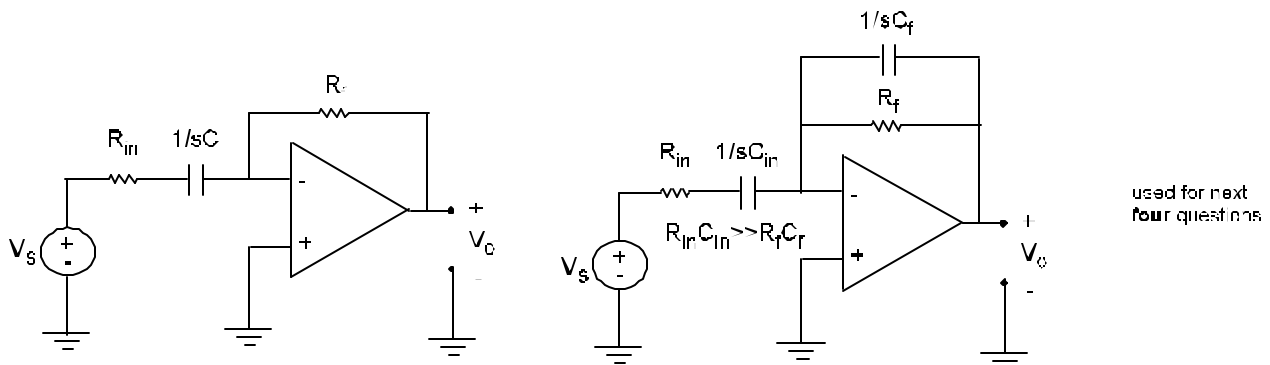*Why or why not?* _____
_____

____ If the temperature of J_{sense} becomes lower than that of the $J_{reference}$, v will be negative.
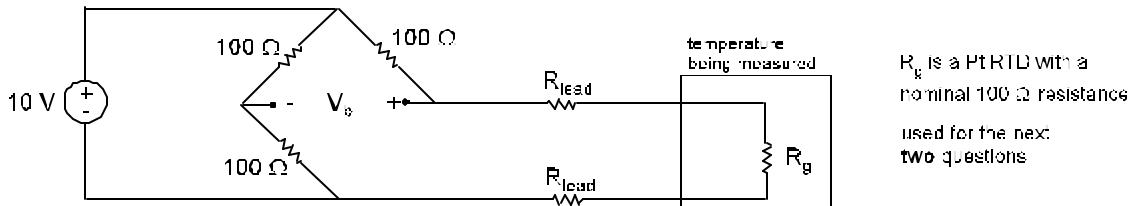
____ A two-wire measurement is used in determining an RTD temperature. For T>0°C, V_b>0.
Why or why not? _____
_____

____ The presence of lead resistance will tend to cause V_b to indicate too high a temperature.

____ Increasing C in the *high-pass* filter will lower its break frequency.

____ Increasing R_{in} in the *bandpass* filter has no effect on its lower break frequency .

____ Increasing C in the *high-pass* filter has no effect on its high-frequency gain.

____ Increasing C_{in} in the *bandpass* filter has no effect on its passband gain.