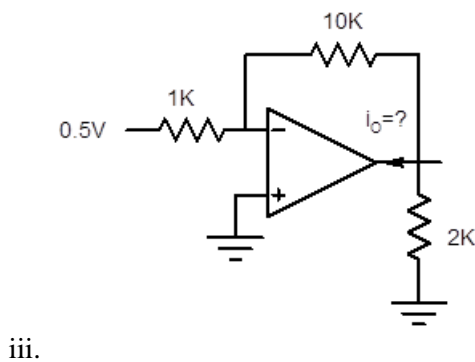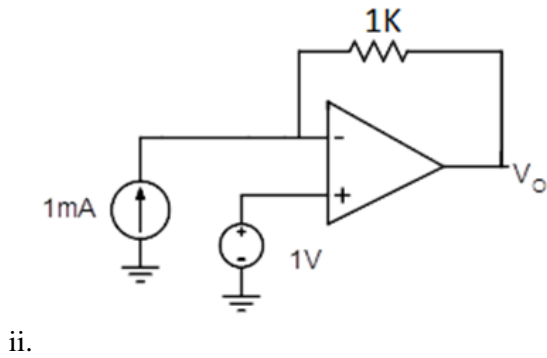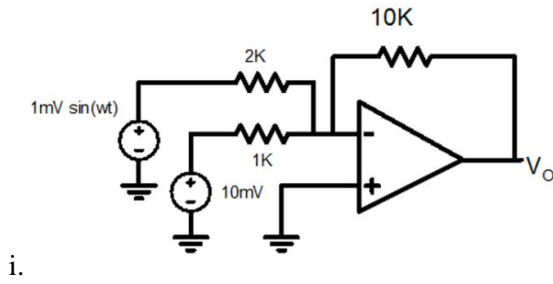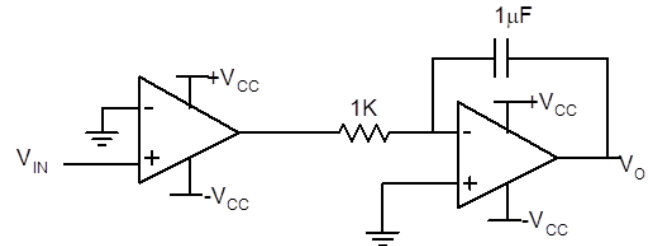1. Determine the output of the ideal op-amp circuits shown below.


i.

ii.

iii.

iv.
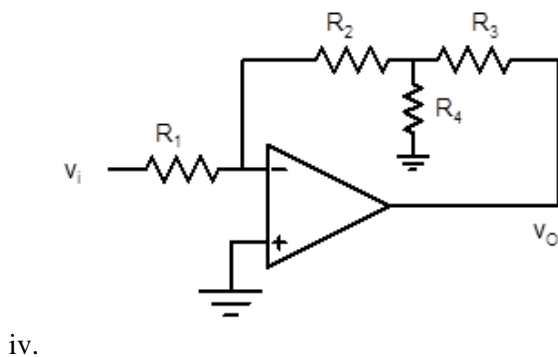
2. Design an op-amp circuit that would generate the following output voltage $V_O = 2v_{s1} + 4v_{s2} - 8v_{s3} - 10v_{s4}$ where v_{s1}, v_{s2}, v_{s3} and v_{s4} are input voltages.

3. Design an op-amp circuit that can produce $V_O = K \times V_{IN}^2$ where V_{in} is the input voltage.

4. Sketch the output voltage of the circuit shown below for $V_{in} = 1V sin(2\pi ft); f = 1KHz$ and supply voltages of $\pm 5V$

5. Determine the output for the ideal op-amp circuit shown below.
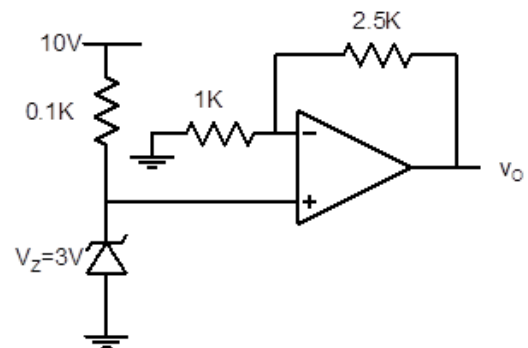
6. Design a temperature sensor using a couple of OP-Amps and resistors.