EE 206: Homework #7

Op Amp Amplifiers. Due Monday, March 9th

Please make the subject "EE 206 HW#7" if submitting homework electronically to Jacob_Glower@yahoo.com (or on blackboard)

1) Design an op-amp circuit to implement

$$Y = 4X$$

Simulate this circuit in PartSim with

- x(t) = 1Vp, 1kHz sine wave

Is Y four times X?

2) Design an op-amp circuit to implement

$$Y = -4X$$

Simulate this circuit in PartSim with

- x(t) = 1Vp, 1kHz sine wave

Is Y four times X and 180 degrees out of phase?

3) Design an op-amp circuit to implement

$$Y = 4X - 10$$

4) Design an op-amp circuit which outputs

- -10V when R = 1000 Ohms
- +10V when R = 1200 Ohms

5) Simulate the circuit for problem #4. Plot the output voltage for 1000 < R < 1200 Ohms

	Vout		
R	Calculated prob 4 - ignoring loading	Calculated including loading	Simulated prob 5
1000			
1050			
1100			
1150			
1200			