Started on	Wednesday, 24 April 2019, 7:40 AM
State	Finished
Completed on	Wednesday, 24 April 2019, 8:11 AM
Time taken	30 mins 41 secs
Grade	**100.00** out of 100.00

Question 1

Correct

Mark 100.00 out of 100.00
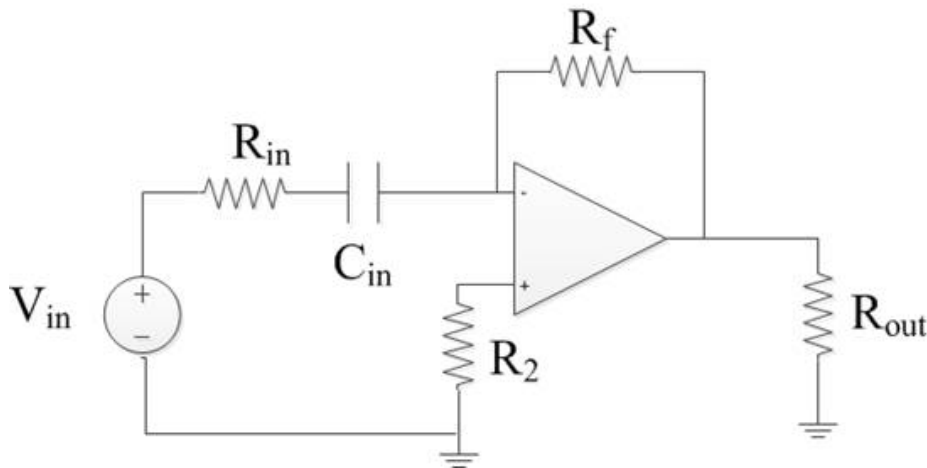
Quiz 10c

Given: R_{in} = 10 kΩ (kilo Ohm) C_{in} = 0.05 μF (micro F) R_f= 10 kΩ (kilo Ohm)

  R_2 = 10 Ω (Ohm) R_{out} = 1 kΩ (kilo Ohm)

  V_{in} = 20 cos(ωt) Volts

You can assume the opamp is ideal and has power input rails at +20V and -20V.

In your answers below, report the magnitude as positive and the angle between $-180 \le \theta \le 0°$.

a) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency ω = zero rad/sec.

   V_{Rout} (ω = 0) = [0] ✓ at angle [-90] ✓ ° (Degrees) Volts

b) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency ω = 50 rad/sec.

   V_{Rout} (ω = 50) = [.5] ✓ at angle [-91.43] ✓ ° (Degrees) Volts

c) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency ω = 1,000 rad/sec.

   V_{Rout} (ω = 1,000) = [8.94] ✓ at angle [-116.56] ✓ ° (Degrees) Volts

d) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency ω = 5,000 rad/sec.

   V_{Rout} (ω = 5,000) = [18.57] ✓ at angle [-158.19] ✓ ° (Degrees) Volts

Correct

Marks for this submission: 100.00/100.00.