Started on	Wednesday, 26 April 2017, 10:57 AM
State	Finished
Completed on	Wednesday, 26 April 2017, 11:32 AM
Time taken	34 mins 42 secs
Grade	**100.00** out of 100.00
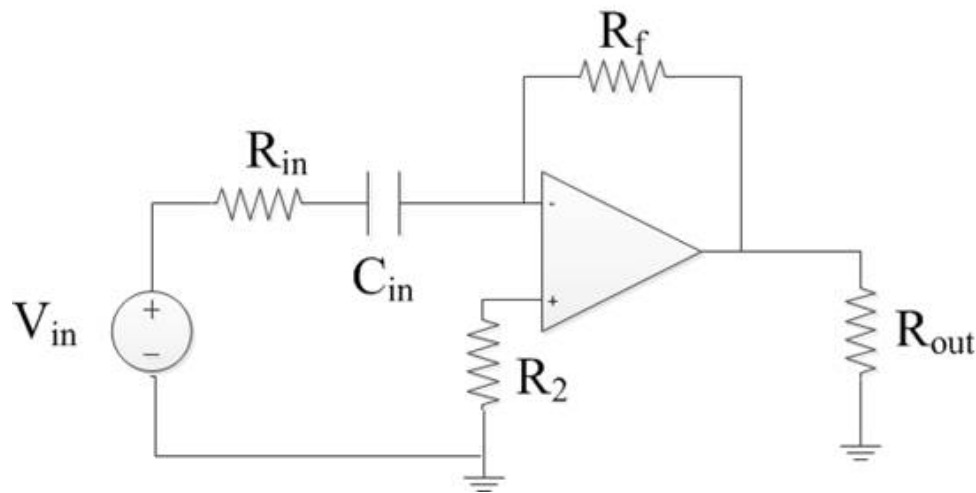
Quiz 10a

Given: R_{in} = 10 kΩ (kilo Ohm) C_{in} = 0.1 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 = 100 rad/sec.

V_{Rout} (ω = 100) = | 2 | ✓ at angle | -95.71 | ✓° (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) = | 14.14 | ✓ at angle | -135 | ✓° (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) = | 20 | ✓ at angle | -168.7 | ✓° (Degrees) Volts

Correct

Marks for this submission: 100.00/100.00.