
Started on	Wednesday, 26 April 2017, 5:32 PM
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State	Finished
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Completed on	Wednesday, 26 April 2017, 6:45 PM
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Time taken	1 hour 12 mins
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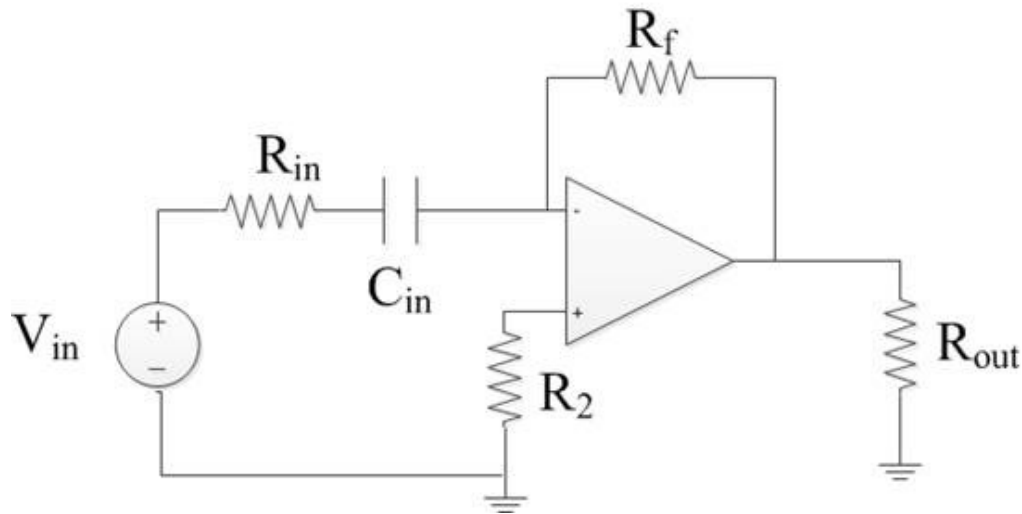
Overdue	12 mins 56 secs
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Grade	100.00 out of 100.00
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Question 1

Correct

Mark 100.00 out of 100.00



Quiz 10c

Given: $R_{in} = 10 \text{ k}\Omega$ (kilo Ohm) $C_{in} = 0.05 \text{ }\mu\text{F}$ (micro F) $R_f = 10 \text{ k}\Omega$ (kilo Ohm) $R_2 = 10 \text{ }\Omega$ (Ohm) $R_{out} = 1 \text{ k}\Omega$ (kilo Ohm) $V_{in} = 20 \cos(\omega t)$ 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 $-180 \leq \theta \leq 0^\circ$.a) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency $\omega = \text{zero}$ rad/sec. $V_{Rout}(\omega = 0) = 0$ ✓ at angle -90 ✓ $^\circ$ (Degrees) Voltsb) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency $\omega = 50$ rad/sec. $V_{Rout}(\omega = 50) = .5$ ✓ at angle -91.43 ✓ $^\circ$ (Degrees) Voltsc) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency $\omega = 1,000$ rad/sec. $V_{Rout}(\omega = 1,000) = 8.9$ ✓ at angle -116 ✓ $^\circ$ (Degrees) Voltsd) Calculate the phasor voltage across resistor R_{out} when the input voltage frequency $\omega = 5,000$ rad/sec. $V_{Rout}(\omega = 5,000) = 18.6$ ✓ at angle -158.2 ✓ $^\circ$ (Degrees) Volts**Numeric Answer**a) $V_{Rout}(\omega = 0) = 0$ at angle -90° Vb) $V_{Rout}(\omega = 50) = 0.4998$ at angle -91.43° Vc) $V_{Rout}(\omega = 1,000) = 8.9443$ at angle -116.57° Vd) $V_{Rout}(\omega = 5,000) = 18.5695$ at angle -158.20° V**Correct**

Marks for this submission: 100.00/100.00.