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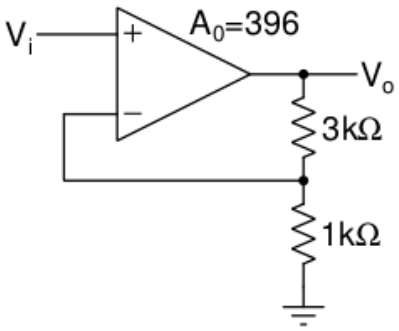
Unit 10 - Week 8: Opamp and negative feedback; Example circuits and additional topics

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2018-09-26, 23:59 IST.

1)

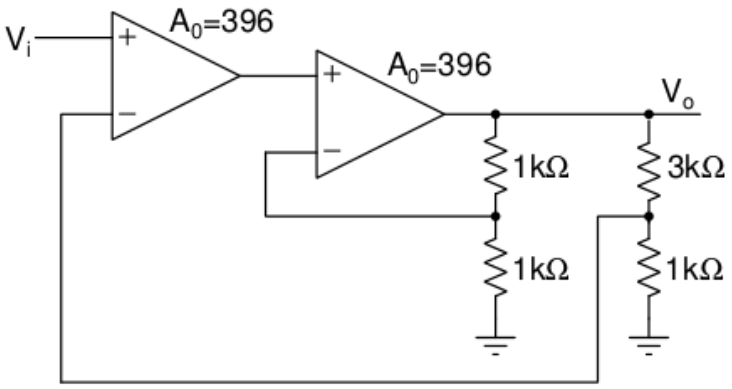


Determine the percentage error from the ideal gain in the figure above. Ideal gain refers to V_o/V_i with an ideal opamps. Percentage error is defined as

$$100\,(V_o/V_i|_{ideal} - V_o/V_i)$$

(The answer must be the percent error. Round off fractional answers to one decimal place.)

No, the answer is incorrect.
Score: 0



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$$100\,(V_o/V_i|_{ideal} - V_o/V_i)$$

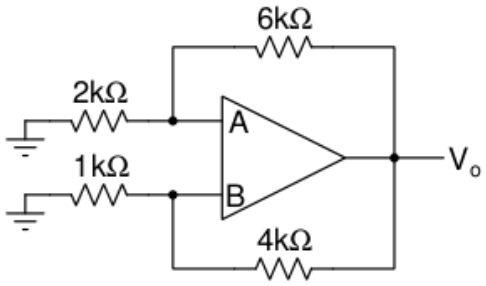
(The answer must be the percent error. Round off fractional answers to one decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 2.0,2.1

1 point

3)



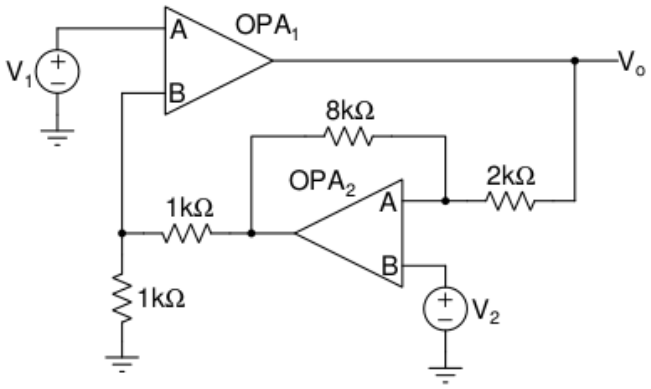
Determine the negative terminal of the opamp in the figure above so that it is in negative feedback.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) A

1 point

4)



$V_o = \alpha V_1 + \beta V_2$

In the circuit above, determine the coefficients α and β in the expression for the output V_o.

(The answer must be the coefficent values. Round off fractional answers to two decimal places.)

Value of α

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) -0.5

1 point

5)

Value of β

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 1.25

1 point

6)

Determine the negative terminals of the two opamps in the figure above so that they are in negative feedback.

Negative terminal of OPA_1

No, the answer is incorrect.

Score: 0

Accepted Answers:
(Type: String) A

1 point

7)

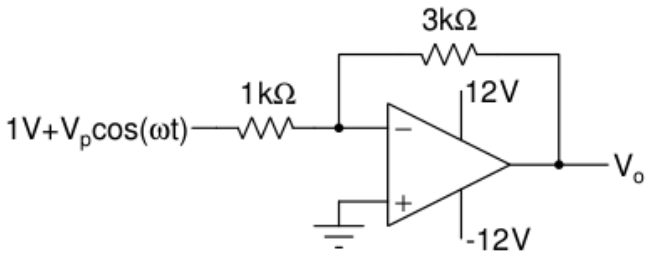
Negative terminal of OPA_2

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) A

1 point

8)



In the figure above, determine the highest amplitude V_p such that the opamp is not saturated.

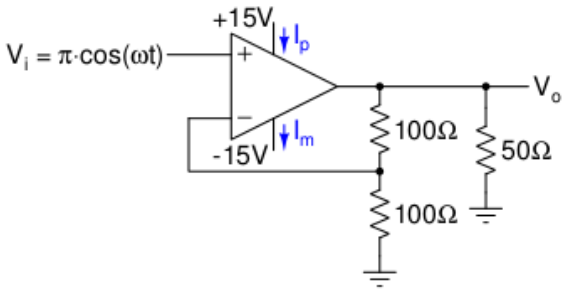
(The answer must be in **volts (V)**. Round off fractional answers to two decimal places.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 3

1 point

9)



In the circuit above, $I_p = I_m = 3$ mA when $V_i = 0$. Determine the average current drawn from the supplies when $V_i = \pi\cos(\omega t)$.

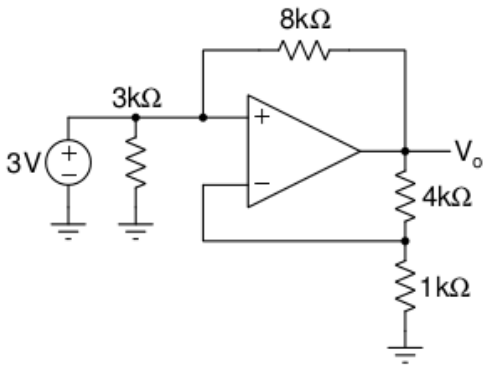
(The answer must be in **milliamperes (mA)**. Round off fractional answers to one decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 53

1 point

10



In the circuit above, determine the power *delivered* by the 3 V source.

(The answer must be in **milliwatts (mW)**. Round off fractional answers to one decimal place.)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) -1.5

1 point

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