

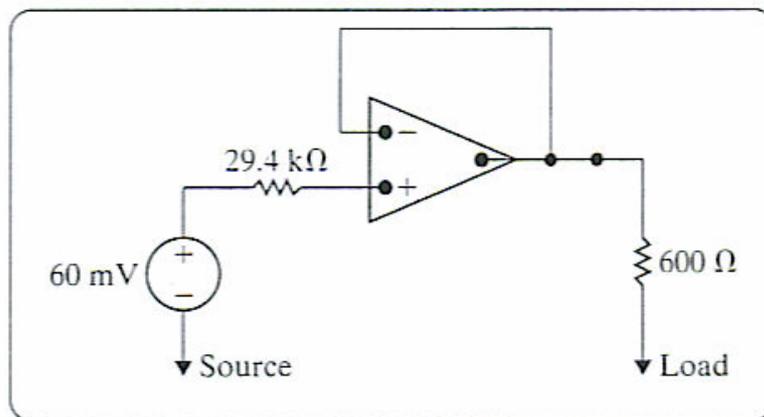
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT
EE-201 ELECTRIC CIRCUITS
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Sec: 9 Quiz # 4 Ser. # Name:

I.D.#

For the circuit shown below calculates

- a. The power absorbed by the 600-ohm resistance.
- b. Repeat (a) when the op-amp is removed from the circuit (i.e., when the 600-ohm resistance is connected in series with the 29.4-kohm resistance).



$$\mathbf{[a]} \quad p_{600\Omega} = \frac{(60 \times 10^{-3})^2}{(600)} = 6 \mu\text{W}$$

$$\mathbf{[b]} \quad v_{600\Omega} = \frac{600}{30,000} (60 \times 10^{-3}) = 1.2 \text{ mV}$$

$$p_{600\Omega} = \frac{(1.2 \times 10^{-3})^2}{(600)} = 2.4 \text{ nW}$$