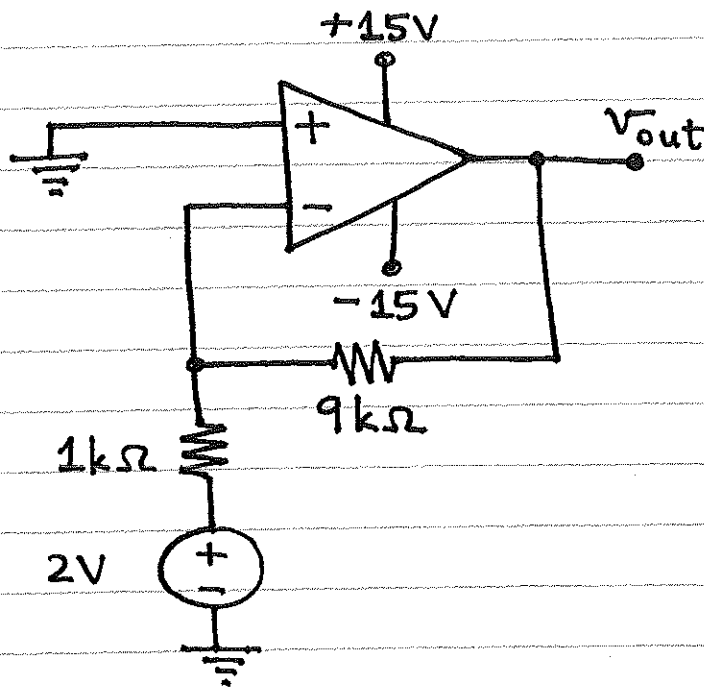


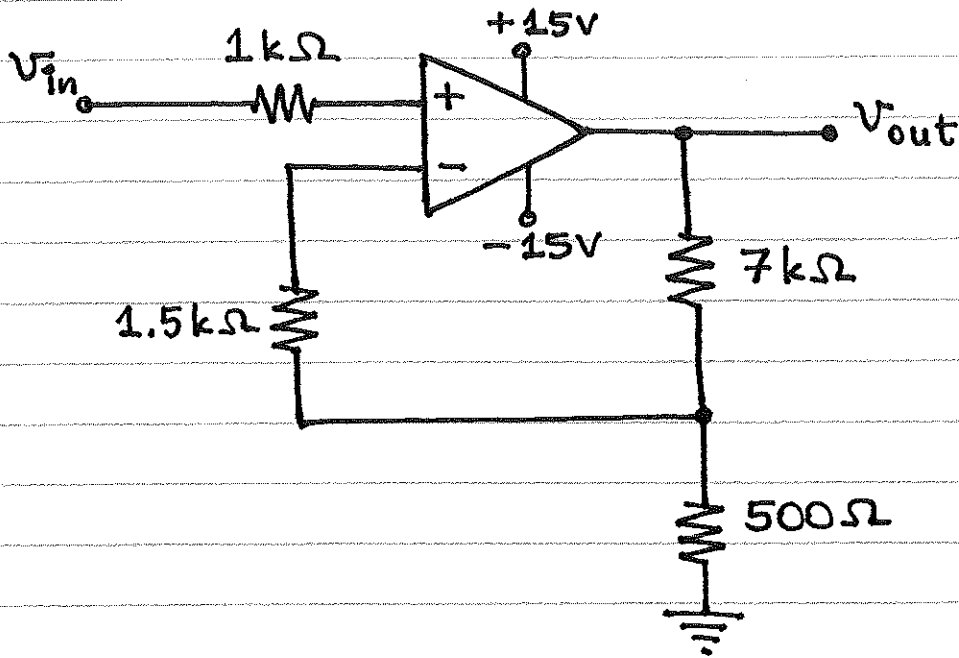
EXTRA-CREDIT QUIZ

1. For the op-amp circuit shown, what is the value of V_{out} ? (Assume ideal op amp.)



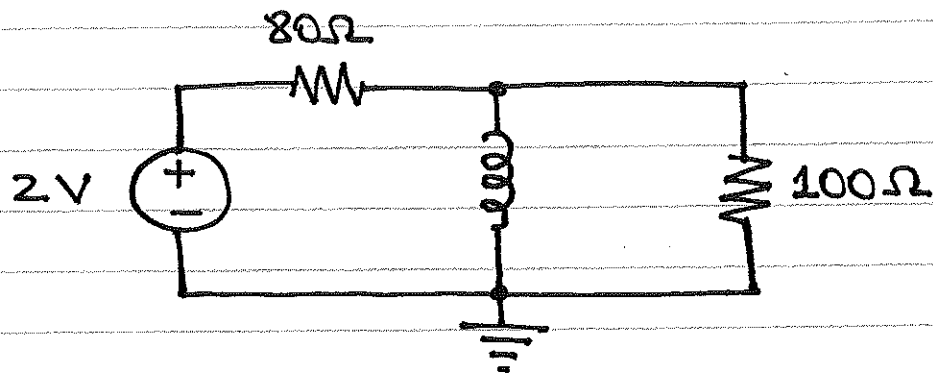
- (a) 15 V (b) 18 V (c) -15 V (d) -18 V (e) -20 V

2. What is the voltage gain of the op-amp circuit shown? (Assume ideal op amp.)



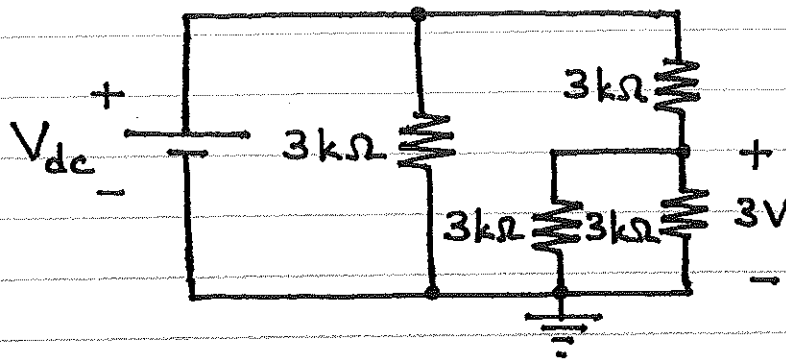
- (a) $-7/3$ (b) $7/3$ (c) $7/2$ (d) 15 (e) -15

3. For the circuit shown, the inductance and the resistance of the inductor are 25 mH and 25Ω respectively. What current flows through the inductor at steady state?



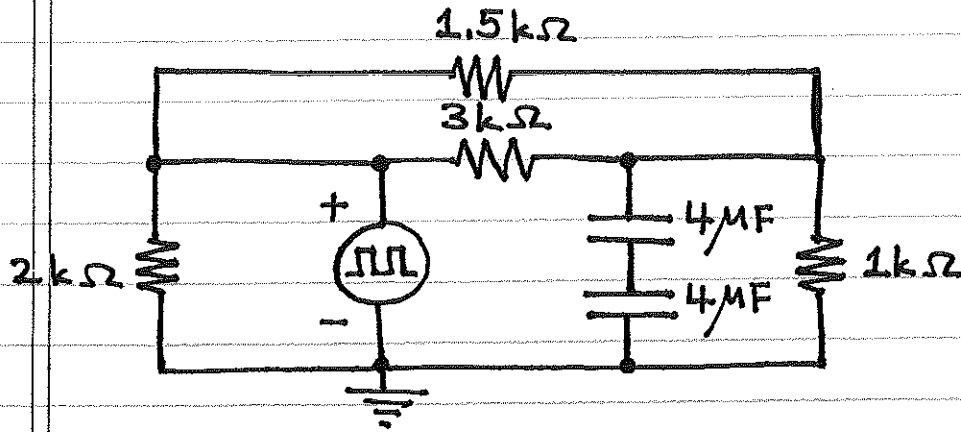
- (a) 4 mA (b) $\sim 11.1 \text{ mA}$ (c) 16 mA (d) 20 mA (e) 25 mA

4. For the circuit shown, what is V_{dc} ?



- (a) 18 V (b) 9 V (c) 6 V (d) 4.5 V (e) 12 V

5. What is the time constant of the circuit shown?



- (a) 1.5 ms (b) $\sim 1.33\text{ ms}$ (c) 1 ms (d) 4 ms (e) 6 ms