

ECE 35, Fall 2019  
Quiz 2

Grade

/ 10

Sequence  
number

Last name

First + middle  
name(s)

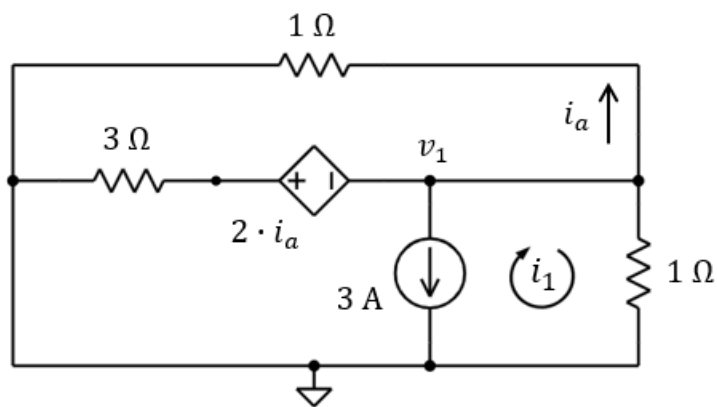
**PID**

**Instructions:**

- Read each problem completely and thoroughly before beginning.
- All calculations need to be done on these sheets.
- Write your answers in the answer boxes for each question. Make sure you list units!
- Answers without supporting calculations will receive zero credit.



- (1) Find the value of **node voltage**  $v_1$  and of **mesh current**  $i_1$ .  
 You can use any analysis technique you want. (5 points)



$v_1$

$i_1$

- (2) (5 points) In the circuit below, someone tweaked resistor  $R$  until the power received by it is maximum. This resulted in  $R = 1\ \Omega$ . What is the value of  $k$  in the circuit?

$k$

