EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Problem 1 (30 pts) **SHOW ALL WORK!**

In the network below, find

1. the power absorbed in the  resistor. (15 pts)
2. the power supplied by the 120 *V* power source. (15 pts)

Hint: Reduce the network to a voltage source in parallel with an equivalent resistance.







120 V



+

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EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Problem 2 (30 pts) **SHOW ALL WORK!**

Use nodal analysis to find

1. the node voltage 
2. the node voltage 
3. the voltage 















60 V

+

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EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DO EITHER PROBLEM 3 OR PROBLEM 4 (NOT BOTH)**

Problem 3 (25 pts) **SHOW ALL WORK!**



*a*



*b*









+

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+

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60 V

30 V



EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DO EITHER PROBLEM 3 OR PROBLEM 4 (NOT BOTH)**

Problem 4 (25 pts) **SHOW ALL WORK!**









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+

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60 V

30 V





EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Problem 5 (30 pts) **SHOW ALL WORK!**















5 *A*

50 V

+

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EEL 3041 Final Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ANSWER SHEET

Problem 1



Problem 2



Problem 3 Problem 4



Problem 5

