School of Engineering
Department of Electrical and Computer Engineering

332:221 **Principles of Electrical Engineering I** **Fall 2012**

Quizlette 5

USING A CALCULATOR WILL SLOW YOU DOWN! Final answers must appear in the appropriate box. Show your work outside the box.

NAME: _____ **LAB SECTION:** _____

1. **Basic Stuff:** Please answer the following questions about FIGURE 1.

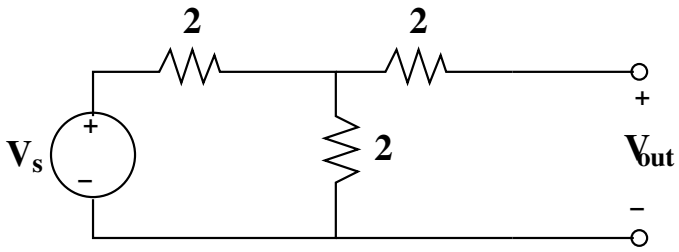

Figure 1: Circuit diagram for problem 1

(a) *(1 pt)* What is the effective resistance of the circuit from the perspective of V_{out}? _____

(b) *(2 pt)* Draw and label the Thevenin Equivalent for the circuit.

(c) *(2 pt)* Draw and label the Norton Equivalent for the circuit.

2. **Getting VERY Cute:**

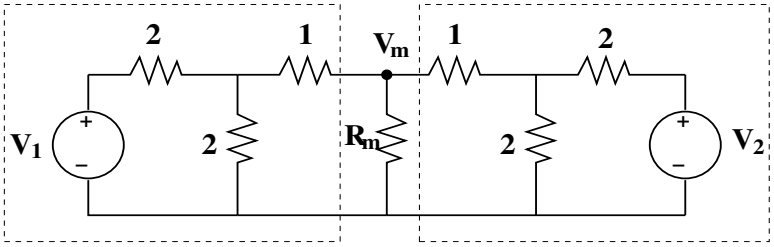

Figure 2: Circuit diagram for problem 2

(a) *(2 pts)* Draw and label a Thevenin Equivalent circuit for each dashed box.

(b) *(2 pts)* What is the voltage, V_m, across resistor R_m?

(c) *(1 pts)* What value of R_m maximizes the power absorbed by R_m?