

## Homework Assignment #2

### Reading Assignment:

Chapters 2 and 3 in Electric Circuits, 8<sup>th</sup> Ed. by Nilsson (omit section 3.5)

### Problem Assignment:

*Note: Be sure to follow the required PROBLEM FORMAT for every assignment in this course.*

Chapter 2 # 2, 4, 9, 18, 19, 21, 24, 25, 28

Chapter 3 # 8, 10, 14, 18, 22, 24, 29, 56

### Selected Answers:

2.2) Valid.  $P_{10\Omega} = 1000$  W delivered,  $P_{5\Omega} = 700$  W delivered

2.4) Valid.  $\Sigma P_{\text{del}} = 300$  W

2.9) Valid.  $\Sigma P_{\text{del}} = 2240$  W

2.25) a)  $i_g = -9$  A    c)  $v_g = 152$  V    d)  $\Sigma P_{ig} = 1368$  W

3.8) a)  $R_{ab} = 64$   $\Omega$     b)  $R_{ab} = 30$   $\Omega$     c)  $R_{ab} = 20$   $\Omega$

3.10)  $P_{30\Omega} = 480$  W

3.14)  $R_L = 24$   $\Omega$

3.18)  $R_1 = 2.1$   $\Omega$ ,  $R_2 = 1.5$   $\Omega$ ,  $R_3 = 3.6$   $\Omega$

3.24) a)  $V_x = 1$  V    b)  $V_x = V_s/30$

3.29) a)  $V_g = 60$  V    b)  $P_{20\Omega} = 16.2$  W

3.56)  $i_o = 2.4$  A,  $P_{140\Omega} = 72.576$  W