BME 3506C   **Fall 2023**

Homework - Study Problems <u>Chapter 2</u>

From the textbook "Electric Circuits" by Nilsson and Riedel (11th edition), work the following problems:

2.1	answer:	1700 W
2.2	answer:	a) Valid
		b) 18 V absorbing, 7 V absorbing, 5 mA delivering
		c) 125 mW
		d) ? optional practice
2.3	answer:	Invalid interconnection
2.4	answer:	300 W
2.7	answer:	a) 20 V
		b) 8 W absorbed
2.8	answer:	Invalid interconnection
2.9	answer:	210 W
2.17	answer:	a) 1.2 A, 0.3 A
		b) 120 V
		c) 180 W
2.20	answer:	a) 25 V
		b) 575 mW delivered, same absorbed
2.21	answer:	a) 0.02 A
		b) 7.5 V
		c) 10 V
		d) 0.5 W
2.25	answer:	a) -9 A
		b) $P_{9\Omega}$: 36 W, $P_{11\Omega}$: 44 W, $P_{10\Omega}$: 40 W, $P_{5\Omega}$: 180 W, $P_{30\Omega}$: 270 W, $P_{4\Omega}$: 100 W, $P_{16\Omega}$: 400 W, $P_{15\Omega}$: 240 W
		c) 190 V
		d) 1710 W
2.26	answer:	a) 1.6 Ω
		b) 6960 W
2.27	answer:	2 kΩ

(Note: power developed is the same as total power delivered)