

# Electric Circuits Assignment Fun!



☆ Reading: pp. 594-603

☆ Problems:

☆ p. 595 P: 1, 4

☆ p. 597 CC: "Turning on a Light"

☆ p. 601 P: 1-5

☆ p. 602 FA: 1, 5, 6, 9

☆ p. 603: What is a benefit of using high-temperature superconductors?

☆ p. 617 R: 20-29, 31, 34, 35, 37-40, 42

*Assignment Fun 1*

☆ Reading: pp. 628-639 (up to "Resistors in Parallel")

☆ Problems:

☆ p. 630 CC: both questions

☆ p. 632 FA: 1-5

☆ p. 634: 1.) What is a semiconductor? 2.) How is a transistor like a switch?

☆ p. 638 P: 1-6

☆ p. 654 R: 1, 3-5, 9-11, 16

*Assignment Fun 2*

☆ Reading: pp. 639-644

☆ Problems:

☆ p. 643 P: 2, 3

☆ p. 644 FA: 1, 2, 3, 5 (Notice 2 is review...)

☆ p. 654 R: 12-14, 19

*Assignment Fun 3*

☆ Reading: 645-650 & 604-606

☆ Problems:

☆ p. 647 P: 1, 2

☆ p. 651 FA: 1-5, 7

☆ p. 655 R: 20, 22-24

☆ You are an electrician and have to wire a kitchen knowing that the homeowners need to use the following appliances. The kitchen is wired in 12 gauge wire that can handle no more than 20A safely. The potential in the kitchen's wiring is 120V. How many lines will you need to (go to page 2)

*Assignment Fun 4*

use, what will go on each line, and what's the total current that will run in each line if all appliances are in use at the same time?

- ☆ window air conditioner: 1000W

- ☆ blender: 300W

- ☆ 2 ceiling fans: 50W each

- ☆ coffee maker: 800W

- ☆ dishwasher: 1300W

- ☆ 5 lightbulbs: 60W each

- ☆ microwave: 1400W

- ☆ refrigerator: 540W

- ☆ garbage disposal: 450W

- ☆ toaster: 900W

- ☆ griddle: 1200W

☆ For two appliances in your household (examples: hairdryer, microwave, stereo...) look for a label on the back or bottom of each appliance that lists electrical information. For each appliance, create a data table (3 rows, six columns) that shows the following information:

- ☆ Appliance

- ☆ Power use

- ☆ Current

- ☆ Voltage rating