

Solar PV Electrical Basics Practice

1. Voltage

Find the voltage

- a) 144V
- b) 1700V
- c) 36V
- d) 392V
- e) 28.2V

2. Current

Find the current

- a) 5A
- b) 0.25A
- c) 44.64A
- d) 1.5A
- e) 2A

3. Resistance

Find the resistance

- a) 5Ω
- b) 12Ω
- c) 330Ω
- d) 2Ω
- e) 0.55Ω

4. Convert to watts

- a) 1800 W
- b) 700,000 W
- c) 160,000,000 W
- d) 4,500,000 W

5. Convert to kilowatts

- a) 2 kW
- b) 4.86 kW
- c) 0.23 kW
- d) 45 kW

6. Convert to megawatts

- a) 2 MW
- b) 700,000,000 W
- c) 200,000 W
- d) 0.0067 MW

7. How many kilowatt-hours would be used by a 100W lightbulb if it was left on continuously for 20 days?

$$20 \text{ days} \times 24 \text{ hours} = 480 \text{ hours}$$

$$480 \text{ hours} \times 100 \text{ W} = 48 \text{ kWh}$$

8. What is your average daily power usage if your utility bill read 750kWh after a 31-day period?

$$750 \text{ kWh} / 31 \text{ days} = 24.193 \text{ kWh} / \text{day}$$

9. What is the resistance of a load if there is an 85V source supplying 3A?

$$85 \text{ V} / 3 \text{ A} = 28.33 \Omega$$

10. If 75V is applied across a 560 Ω resistor, what is the power?

$$75 \text{ V} / 560 \Omega = 0.133 \text{ A}$$

11. How much power does a heating load use when connected to 120V and drawing 30A?

$$120 \text{ V} \times 30 \text{ A} = 3600 \text{ W}$$