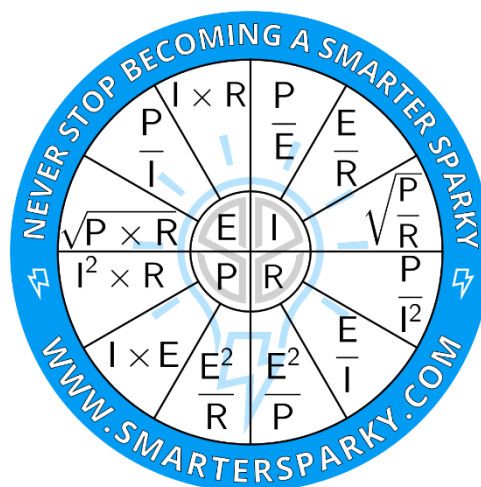


Each row in the table below is a separate question. You are given two values, and need to solve for the missing values. The first question is done for you.

Ohm's/Watt's Wheel Practice

Q#	E	I	R	P
1	12V	2A	6Ω	24W
2	120V	2A	60Ω	240W
3	2V	0.67A	3Ω	1.34W
4	20V	16A	1.25Ω	320W
5	10V	2A	5Ω	20W
6	10V	0.5A	20Ω	5W
7	50V	3A	16.67Ω	150W
8	12V	3A	4Ω	36W
9	120V	4A	30Ω	480W
10	9V	1.5A	6Ω	13.5W
11	5V	0.2A	25Ω	1W



a. Question 1:

$$R = E / I = 12V / 2A = 6\Omega$$

$$P = E \times I = 12V \times 2A = 24W$$

b. Question 2:

$$I = P / E = 240W / 120V = 2A$$

$$R = E / I = 120V / 2A = 60\Omega$$

c. Question 3:

$$I = E / R = 2V / 3\Omega = 0.67A$$

$$P = E \times I = 2V \times 0.67A = 1.34W$$

d. Question 4:

$$E = P / I = 320W / 16A = 20V$$

$$R = E / I = 20V / 16A = 1.25\Omega$$

e. Question 5:

$$R = E / I = 10V / 2A = 5\Omega$$

$$P = E \times I = 10V \times 2A = 20W$$

f. Question 6:

$$E = I \times R = 0.5A \times 20\Omega = 10V$$

$$P = E \times I = 10V \times 0.5A = 5W$$

g. Question 7:

$$E = P / I = 150W / 3A = 50V$$

$$R = E / I = 50V / 3A = 16.67\Omega$$

h. Question 8:

$$I = P / E = 36W / 12V = 3A$$

$$R = E / I = 12V / 3A = 4\Omega$$

i. Question 9:

$$I = E / R = 120V / 30\Omega = 4A$$

$$P = E \times I = 120V \times 4A = 480W$$

j. Question 10:

$$R = E / I = 9V / 1.5A = 6\Omega$$

$$P = E \times I = 9V \times 1.5A = 13.5W$$

k. Question 11:

$$E = I \times R = 0.2A \times 25\Omega = 5V$$

$$P = E \times I = 5V \times 0.2A = 1W$$