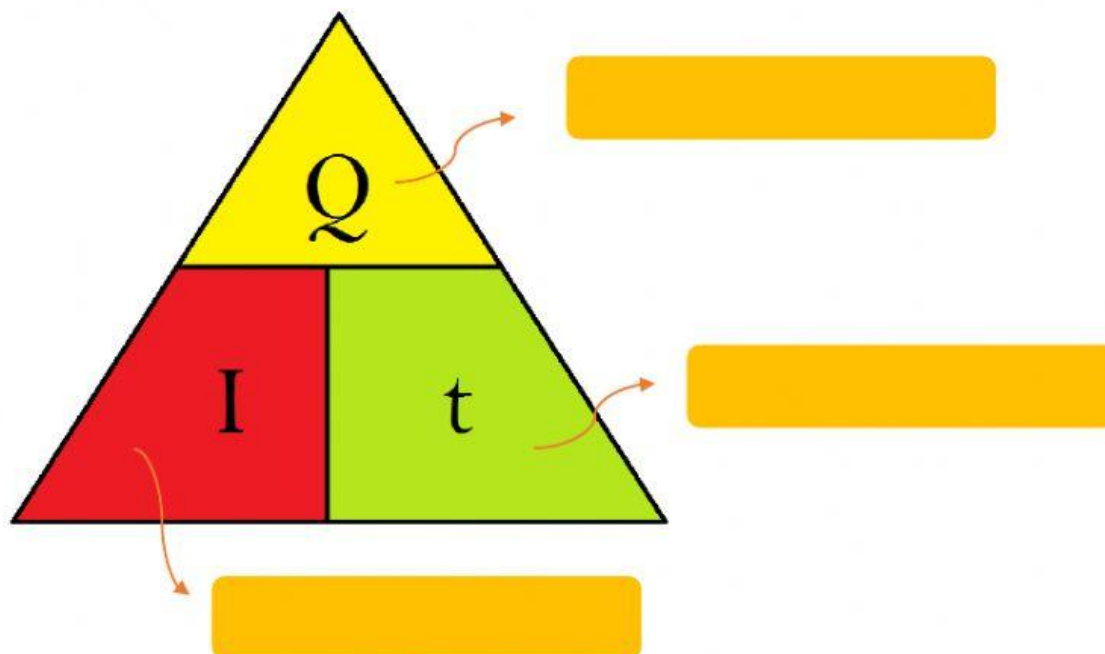


BASIC ELECTRICITY_G11

For each physical quantity on the left, write the letter of the matching unit of measurement on the right.

- | | |
|--|------------|
| _____ 1. charge | a. watt |
| _____ 2. potential energy | b. ohm |
| _____ 3. current | c. coulomb |
| _____ 4. resistance | d. joule |
| _____ 5. electric potential difference | e. ampere |
| _____ 6. power | f. volt |



Electric Current

Time

Electric Charge

BASIC ELECTRICITY_G11

1. If a battery can produce a charge of 3000 mA for 1 hour before it is depleted, for **how long could it produce a current of 2000 mA** ?

_____ hours

2. A hair dryer draws a current of 3 A. If it is switched on for 5 minutes. **How much charges that flow** ?

_____ Coulombs

The diagram shows the equation $I = nAvq$ with arrows pointing from descriptive labels to each variable:

- I**: Current
- n**: Electrons per m^3 in the material
- A**: Cross-sectional area of material
- v**: Drift velocity of the charges in the material
- q**: Charge of each charge carrier moving through material (usually electrons)

1. There are 6.5×10^{17} charge carries within volume of resistance R. The cross-sectional area is $2.4 \times 10^{-6} m^2$. The current flow is 1000 mA. **Calculate the drift velocity of the charge carries within the resistor R.**

2. The drift velocity of free electrons in a conductor is v , when a current I is flowing in it. If both the radius and current are doubled, then **the drift velocity will be** _____.

BASIC ELECTRICITY_G11

Fill in the BLANK.

V (volt)	I (Ampere)	t (second)	R (Ohm)	W (Joule)	P (Watt)
3	2	0.5			
	4	1	6		
8	0.5			12	
4		2	1		16
	0.2	0.5		4	8