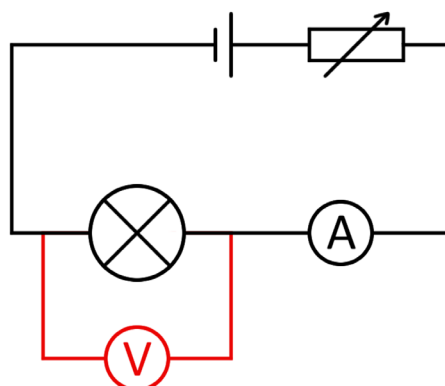


Name:

Class:



A student sets up the circuit in the figure below to investigate the resistance of a lamp.

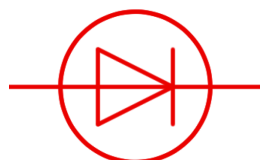


Accept any correct version of the voltmeter drawn in parallel to the lamp.

The student also needs to add a voltmeter to the circuit.

On the figure above draw where the voltmeter should be connected.

Draw the electrical symbol for a diode.



What is the law of refraction?

The law of refraction states that the angle of incidence is greater than the angle of refraction.

 The mass of a toy car is 5 kg and it has an acceleration of 4 m/s².

i. Calculate the force needed to accelerate the toy car.

 Use the equation: force = mass $\times$ acceleration

$$\text{Force} = 5 \times 4$$

$$\text{Force} = \mathbf{20\text{ N}}$$

$$\text{Force} = \mathbf{20\text{ N}}$$

ii. Another toy car requires a constant force of 30 N to move it along a surface.

Calculate the work done on the car when it moves a distance of 50 m.

 Use the equation: work done = force $\times$ distance

$$\text{Work done} = 30\text{ N} \times 50\text{ m}$$

$$\text{Work done} = \mathbf{1500\text{ J}}$$

$$\text{Work done} = \mathbf{1500\text{ J}}$$

The table shows the main sections of the electromagnetic spectrum.

Gamma rays	X-rays	Ultraviolet	Visible	Infrared	Microwaves	Radio
------------	--------	-------------	---------	----------	------------	-------


 State **two** sections of the spectrum that are used for communications.

 Any **two** of the following:

Infrared, microwaves, radio and visible light.