

NAME: \_\_\_\_\_

SNC 1PI  
Electricity Practice Exam

1. State the three parts of the Law of Electric Charge

opposite charges attract  
like charges repel  
charge objects attract neutral

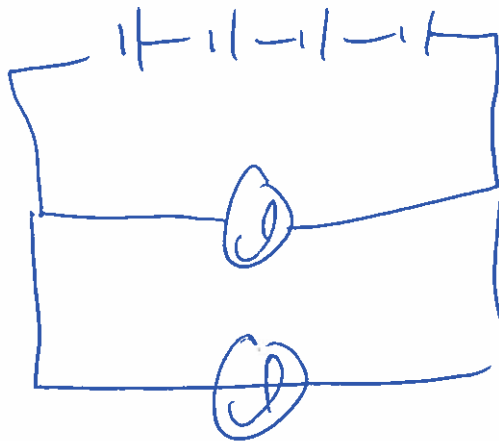
2. Explain the three ways to charge an object.

friction

conduction

induction

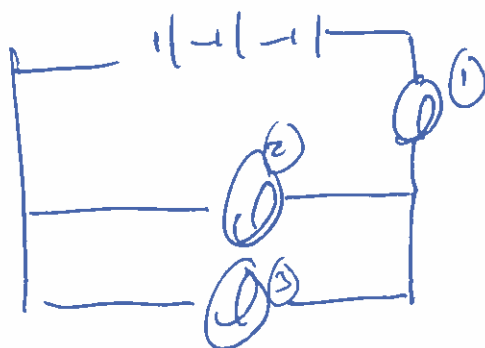
3. Draw a circuit diagram that has four 1.5 volt cells connected in series. There are two light bulbs, each connected in parallel. State the voltage at the battery and at each light.



voltage at  
light bulbs  
the same  
as the 4 cells

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4. Draw a circuit diagram that has a 3 cell battery in series with 1 light bulb in series and two light bulbs in parallel. What is the voltage at the battery and each light bulb?



5. The current in a circuit is 2.4 A. What is the resistance if the voltage is 120 V?

$$R = \frac{V}{I}$$
$$= \frac{120}{2.4}$$
$$= 50$$

$$I = 2.4 \text{ A}$$
$$V = 120 \text{ V}$$
$$R = ?$$

∴ the resistance is 50 Ω.

6. An electric toaster is connected to a 120 V outlet in the kitchen. If the heating element in the toaster has a resistance of 14 Ω, calculate the current flowing through it. (5 marks)

$$I = \frac{V}{R}$$
$$= \frac{120}{14}$$
$$= 8.6$$

$$V = 120 \text{ V}$$
$$R = 14 \text{ } \Omega$$
$$I = ?$$

∴ the current is 8.6 A.

7. Using the Law of Electric Charges, state what will happen in each of the following situations.

a) positive approaches a negative *attract*

b) positive approaches a neutral *attract*

c) positive approaches a positive *repel*