



Consider the circuit (shown in the figure on the left) of a light bulb hooked to a battery. The positive and negative terminals of the battery are indicated. Electrical current is considered the amount of charge passing a certain point per unit time. As such it has units of Coulombs per second.

A) If the light bulb were not present, how would you compare the electrical current at points A and B? Explain your reasoning.

B) When the light bulb is present, how do the currents at point A and B compare? Explain.

C) Consider a single charged particle moving in the wire. How would this particle's kinetic energy compare at points A and B?

E) Can charged particles vanish?