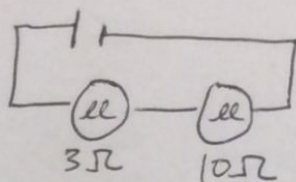


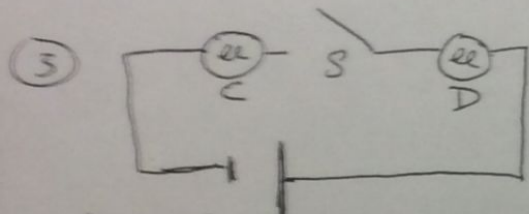
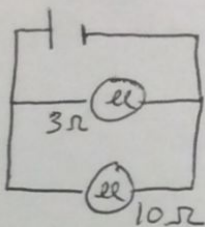
Bulb Brightness

① Which bulb is brighter?



Do we compare: R, I, V or P ?

② Which bulb is brighter?



Mary is a physics student attempting to predict the circuit outcome.

C and D are identical bulbs.

Mary says "Before S is closed C is off and D is on because current cannot reach C. After S is closed, both C and D are on. But C is not as bright as D because current reaches D first."

a) i.) Which aspects of Mary's reasoning, if any, are correct?

ii.) Which aspects are incorrect? Explain.

b) i.) Write a junction rule and loop rule after S is closed.

ii.) Which equation(s) support Mary's reasoning? Explain.