



You work for a company that makes many circuits to be placed in Integrated Circuits (IC's). For one such design, a voltage source is available with a voltage of 5V and an internal resistance of 2KΩ. In this design, an output voltage of 3V is needed in order to drive some other circuit. In looking at your design, one of your colleagues discovered that a very similar design that is needed for a different project; however, it needs an output voltage of approximately 1.75V at point V. In the production of IC's it is easier to make one design and either complete or cut a circuit than it is to make two different designs, but resistors are not the easiest things to make. With the process that your company uses, you are only able to make 1kΩ and 3kΩ resistors. Your job is to design a circuit that corresponds to the space requirements displayed above and produces an output voltage of approximately 1.75V when switch A is closed.