Questions suggested for Tutorial 03 (Nodal Analysis)

In the following two questions, you should **write equations that could be solved to find all the node potentials**. You do not need to do the solution itself: we assume a computer is available for that.

For each circuit, first write the equations by the 'extended nodal analysis' method (lots of equations, simple rules). This is a practice at writing KCL and being systematic. It's commonly useful for exam tasks with circuits of similar complexity to these ones.

Then do it again by using as many simplifications as you can to reduce the number of equations and extra unknowns you introduce: e.g. the supernode method, substituting definitions of controlling-variables.

1. Identify the nodes (one is already marked as the reference).
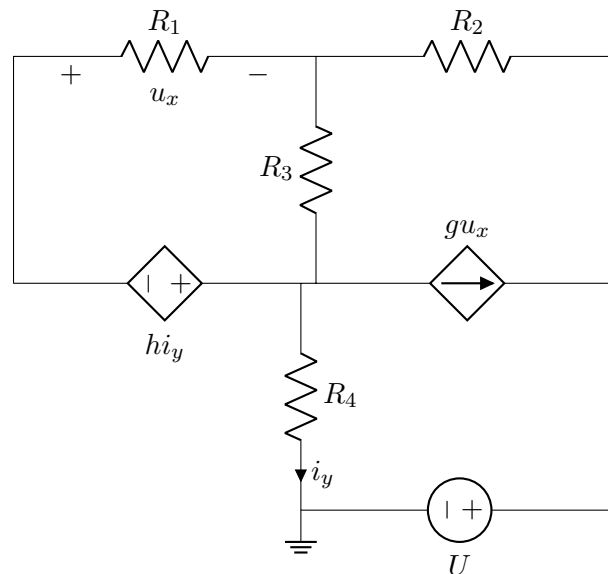
2. (The nodes in this case are already marked with potentials.)
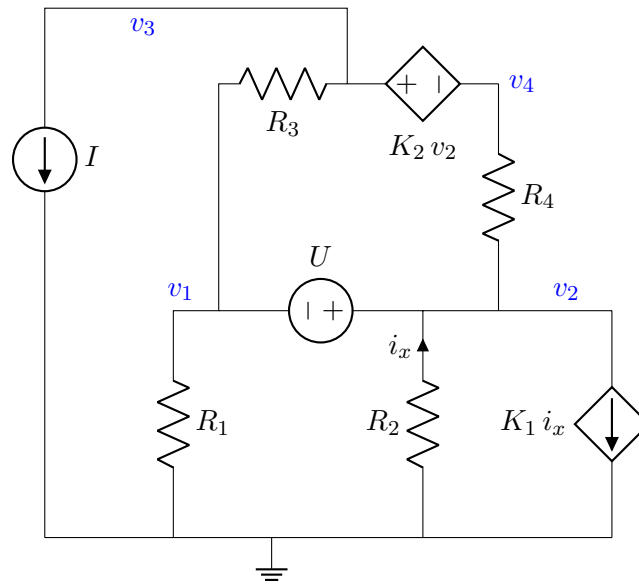
3. More time available? Or want to focus first on hand-solutions that aren't just about writing equations for a computer to solve?

The have a go at question 8 from this Topic's "exercises" file.

And/or, try applying nodal analysis to solve Q1b in the 2014-01 'IT' exam.