

Hints for Drill Exercise 1.10

This problem has a current dependent current source ($2i$). It depends on the current (i) flowing across the 1Ω resistor. Since we have not seen dependent sources in class, I am including a set of steps to drive you through the solution. My recommendation is for you to use each step only if you have a need for it.

- a) The current i can be found if you see how much current flows through the 1Ω and the 3Ω resistors.
- b) Once you know the value of i , you can get the voltage across the 3Ω resistor (call it v_3).
- c) Currents in the 1Ω resistor and the 4Ω resistor determine the current in the 7Ω resistor. this fixes the voltage at the negative terminal of the voltage source v_s . This can be used to find the voltage across the current dependent current source v .
- d) Use KCL to find i_s from the node at the negative (or positive) side of v_s .