**02 Source Transformation and**

**Equivalent Source Theorem**

1 Use Thevenin’s theorem to simplify this circuit, calculate the current flowing through RL, and prove that your simplication is correct.

Note：1)Use half-biased voltage method.

2)Is there any defect with the half-biased current method which discussed in our class? And discuss the advantages and disadvantages of open short circuit method, direct measurement method and semi-biased method.



2. Use Norton’s theorem to simplify this circuit, and calculate the current flowing through RL.



3. The internal resistor of ideal voltmeter is infinity, and the internal resistor of ideal ammeter is zero. But practical voltmeter and ammeter is different. Use a practical voltmeter and ammeter to measure the voltage-current characteristic of a linear resistor R=200Ω, the internal resistance of voltmeter is 100 kΩ, and the internal resistance of ammeter is 0.2Ω. How do we connect voltmeter and ammeter so that the error is minimal? Design a circuit and give a description or explanation.