Special Problem 1.5-1

The amplifier in the circuit below has an **input resistance** of **2KΩ**.

The **source** voltage is **3.0 V**

When **R$_L$** = **1KΩ**, the output voltage is **5 V**.

When **R$_L$** = **infinity**, the output voltage is **10 V**.

Find the **output resistance** and **open-circuit voltage gain** of this amplifier.