

### Special Problem II.B-7

Two identical amplifiers are connected as shown below.

Each has a **gain of 10 dB** and an equivalent (input) **noise temperature of 800 degrees Kelvin**.

The **noise spectral power density at the output of the second amplifier is 108,000 k** (where **k** is **Boltzman's Constant**).

Determine the **antenna noise temperature  $T_A$**  (hint: its **not 290 K !!**).

