

**Special Problem 4.C-3**

Noise with an average spectral **power density** of  $2 \times 10^{-21}$  W/Hz is incident on the input of an amplifier.

This amplifier has a gain of **13 dB**, an equivalent input noise temperature of **1000 degrees K**, and a bandwidth of **10 MHz**.

What is the **power** of the noise (in dBm) at the amplifier output ?