Special Problem 4.C-11

An amplifier has noise incident on its **input**, with a noise temperature of **290 degrees Kelvin**.

This amplifier with a **gain** of **10.0 dB**.

At its **output** there is noise with a spectral power density of $\mathbf{8 \times 10^{-20}}$ **W/Hz**.

Determine the noise figure of this amplifier ?