Special Problem 2.7-1

You design an amplifier with gain $A_v = 10$, using an op-amp with a unity gain bandwidth of 10 MHz.

1) What is the **bandwidth** of this amplifier?

A sinusoidal signal with frequency 10 kHz and magnitude of 1.0 is input to this amplifier.

2) What is the **magnitude** of the output signal?

A sinusoidal signal with a new frequency of 10 MHz and magnitude of 1.0 is input to this amplifier.

3) What is the **magnitude** of the output signal?

You now **redesign** the amplifier such that the **gain** is now $A_v = 20$.

4) What is the **bandwidth** of this amplifier?