

Special Problem 2.5-2

You design an amplifier with gain $A_{vo} = 10$, 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 $A_{vo} = 20$.

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