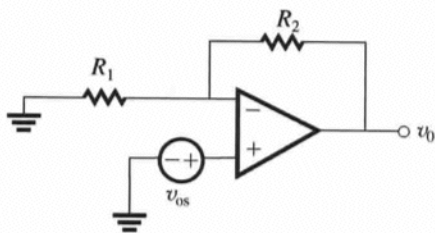


2.94

Inverting configuration



$$v_o = v_{OS} \left( 1 + \frac{R_2}{R_1} \right)$$

$$-0.4 = v_{OS} \left( 1 + \frac{100}{1} \right)$$

$$v_{OS} \simeq 4 \text{ mV}$$

2.96

Input offset voltage = 5 mV

Output dc offset voltage =

$5 \text{ mV} \times \text{closed loop gain}$

$$= 5 \text{ mV} \times 1000$$

$$= 5 \text{ V}$$

The maximum amplitude of an input sinusoid that results in an output peak amplitude of  $13 - 5 = 8 \text{ V}$  is given by:

$$v_i = \frac{8}{1000} = 8 \text{ mV}$$

If amplifier is capacitively coupled then

$$v_{i \text{ max}} = \frac{13}{1000} = 13 \text{ mV}$$