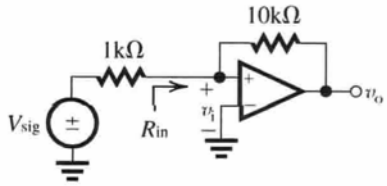
9.56

$$R_{in} = \frac{R}{1 - \text{Gain}} = \frac{100\ \text{k}\Omega}{1 - 0.9} = 1000\ \text{k}\Omega = 1\ \text{M}\Omega$$

Ex: 9.15



Using Miller's theorem we have

$R_{in} = \frac{10\ k\Omega}{A + 1}$, $V_i = \frac{R_{in}}{R_{in} + 1\ k\Omega} V_{sig}$ and

$V_o = -AV_i$

Assuming $V_{sig} = 1$ V we have

A(V/V)	$R_{in}(\Omega)$	V_i(mV)	V_o(V)	V_o/V_{sig} $\left(\frac{V}{V}\right)$
10	909	476	4.76	4.76
100	99	90	–9	–9
1000	9.99	9.9	–9.9	–9.9
10000	1	0.999	–9.99	–9.99