

1. FIGURE 1 shows two amplifier circuits, each of which has one or two unknown voltages (shown highlighted). Select, from TABLE A, the most appropriate value for the unknown voltages for each circuit. Assume that the op-amps are ideal and that the magnitude of their output voltages is less than their maximum peak output voltage swing (V_{OM}). **Show all working!**

$- 100 \text{ mV}$	$+ 100 \text{ mV}$	$- 1 \text{ V}$	$+ 1 \text{ V}$
$- 200 \text{ mV}$	$+ 200 \text{ mV}$	$- 2 \text{ V}$	$+ 2 \text{ V}$
$- 300 \text{ mV}$	$+ 300 \text{ mV}$	$- 3 \text{ V}$	$+ 3 \text{ V}$
$- 400 \text{ mV}$	$+ 400 \text{ mV}$	$- 4 \text{ V}$	$+ 4 \text{ V}$
$- 500 \text{ mV}$	$+ 500 \text{ mV}$	$- 5 \text{ V}$	$+ 5 \text{ V}$
$- 600 \text{ mV}$	$+ 600 \text{ mV}$	$- 6 \text{ V}$	$+ 6 \text{ V}$

TABLE A

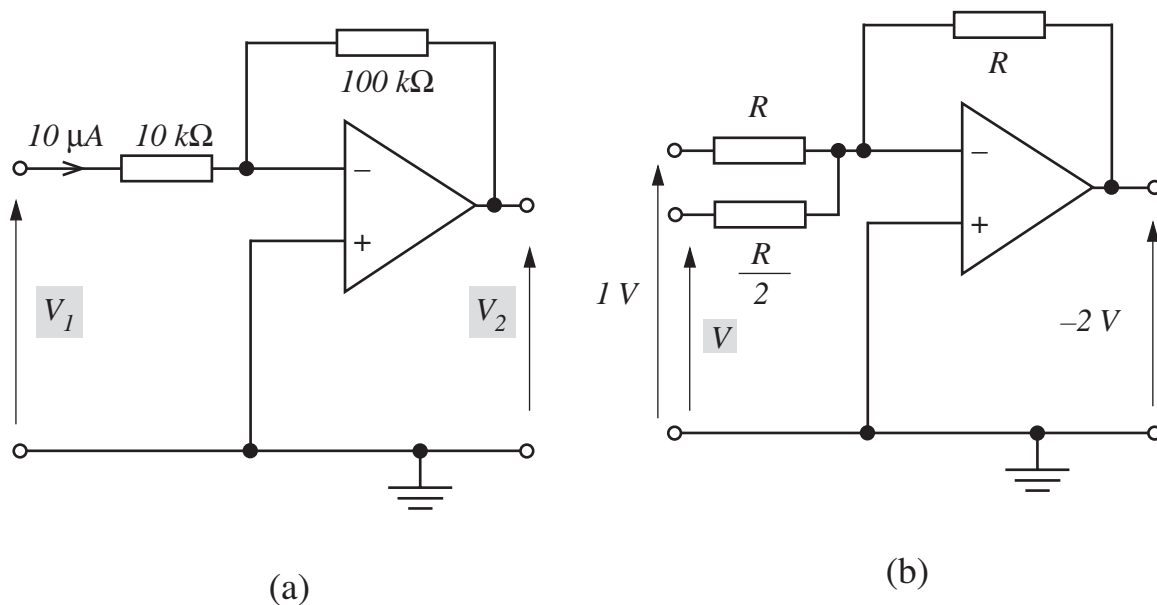


FIG. 1