

# 2001 1 II

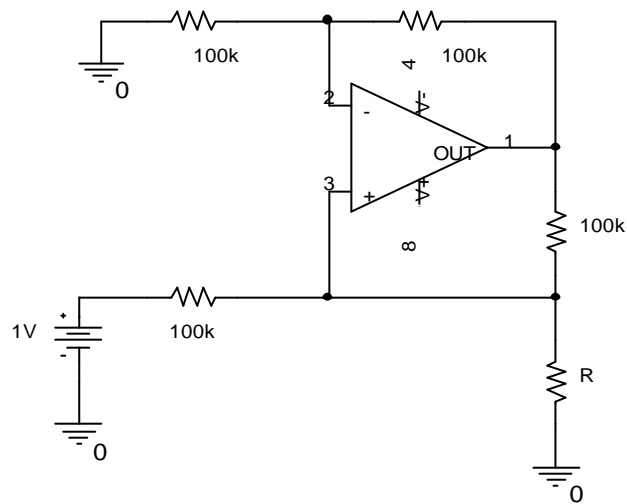
\* 20 , 가 .  
 \* 0 .

(1)

(a)  $v_o = 3v_2 - 5v_1$

(b)  $v_o = \frac{1}{2}(v_2 + v_1)$

(2)



(a) , R

(b) 가 ±10V ,

(c) 1 ~ 1000kΩ ,

(d) 4 100kΩ 가 1% , (c)  
 가 % ,

(e) (d) 가 5%  
 가 가?

(3) A B 가

$v_A = 0.1\sin(2p \times 60t) + 0.05\sin(2pt)$  V,  $v_B = 0.1\sin(2p \times 60t) - 0.05\sin(2pt)$

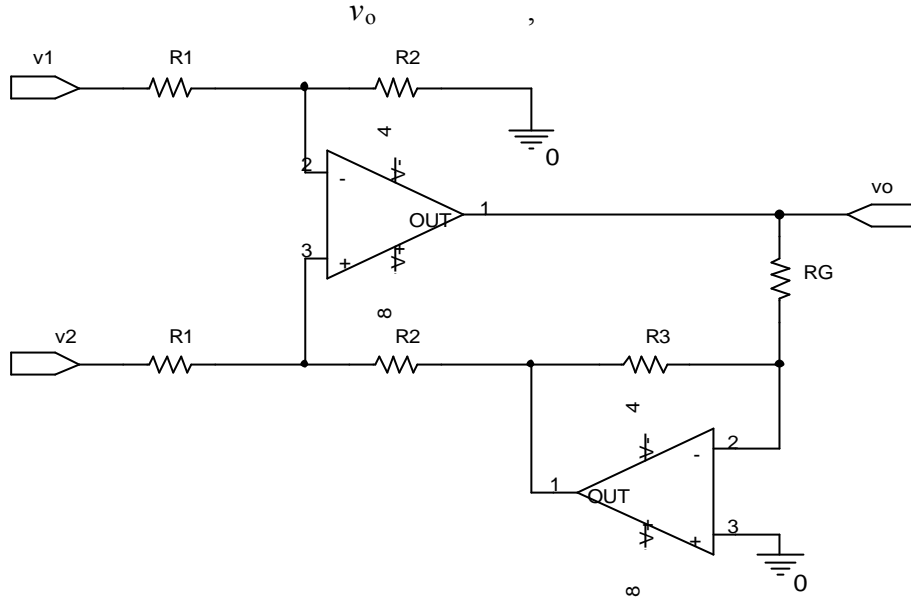
(a) ,

(b) 10 .

(c) 가 40dB CMRR 가 ,

(d) (c)

(4)



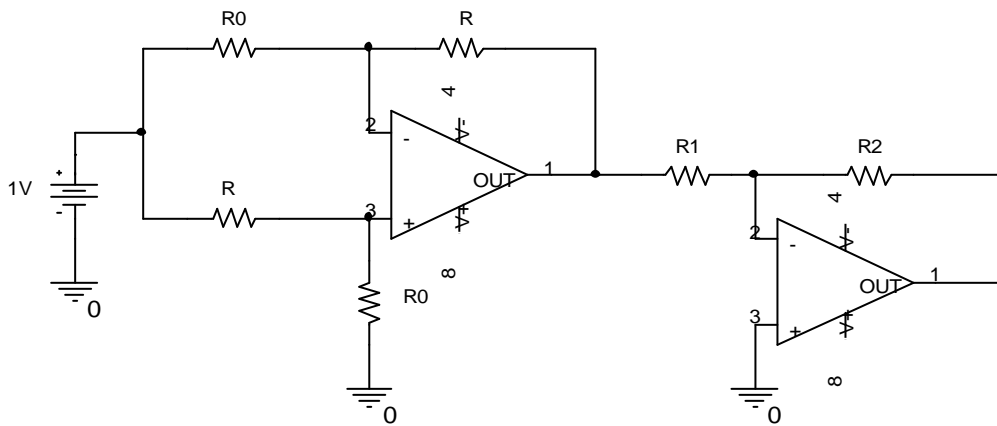
(5)

strain gage 가 load cell , strain gage

$R$  load cell 가  $F$   $R = R_0(1+d)$ ,  $d = 0.001F$

$R_0 = 100\Omega$  ,  $F$  0 ~ 100N

(e)  $d$



(f) 가 , 10V 가 ,  $R_1$   $R_2$

(g) , sensitivity 가? , 0.1N

가?