

1. Figure 1 shows an op amp connected in the noninverting configuration.

(a) Find the expressions for  $A$  &  $\beta$ . (30%)

(b) Find the expressions for  $V_o/V_s$ ,  $R_{in}$ ,  $R_{out}$  (30%)

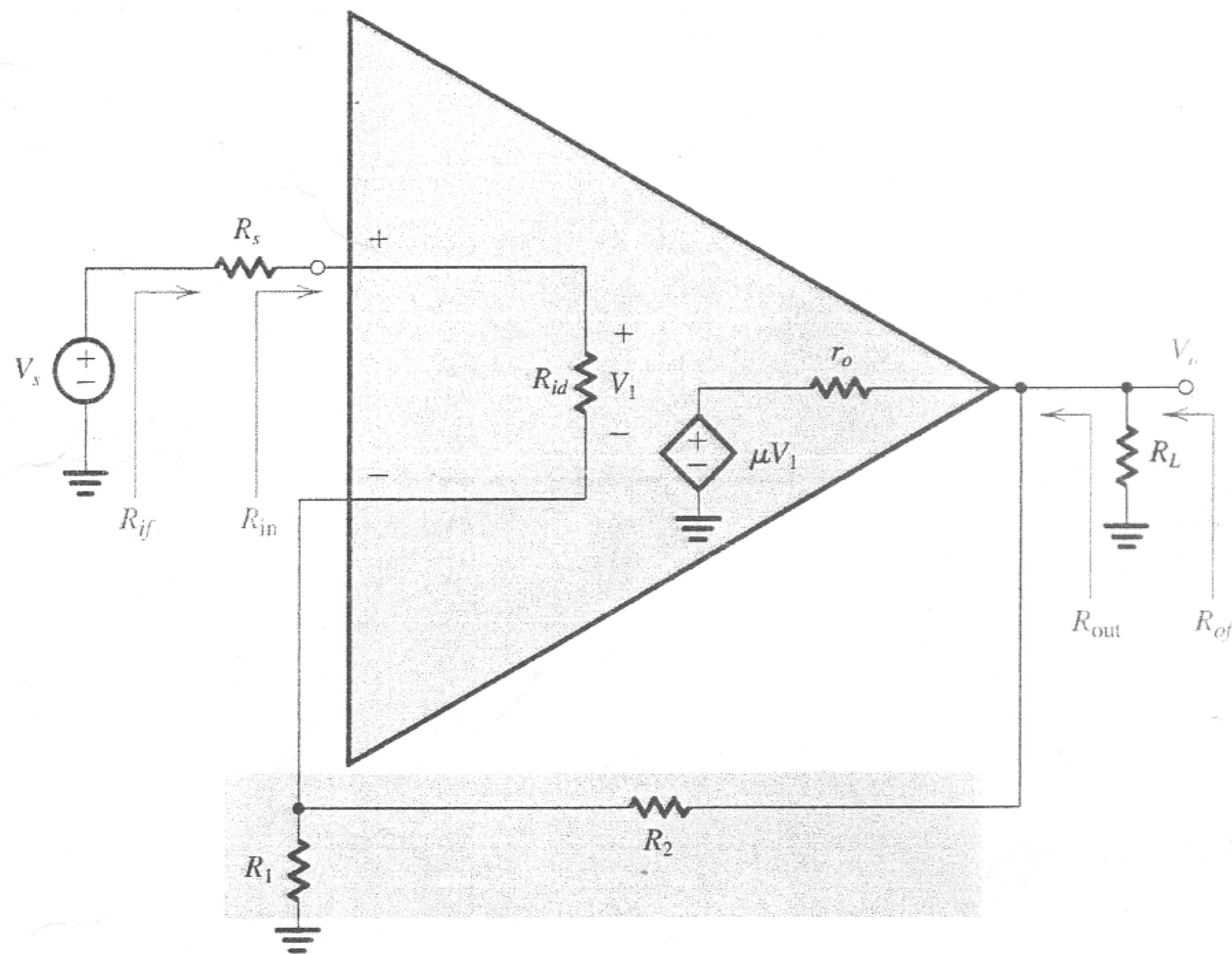


Figure 1

2. For each of the op-amp circuits shown in Figure 2,

(a) Identify the feedback topology and indicate the output variable being sampled and the feedback signal. (20%)

(b) Find an expression for  $\beta$ . Assume the op amp to be ideal. (20%)

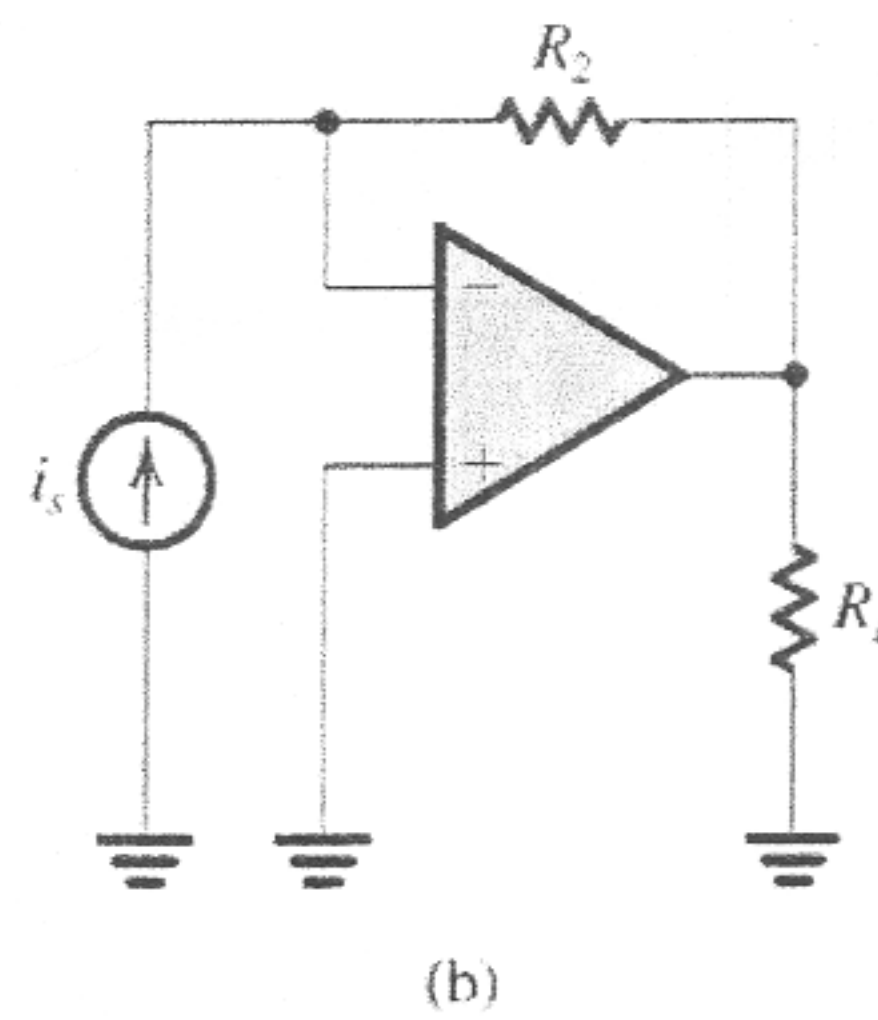
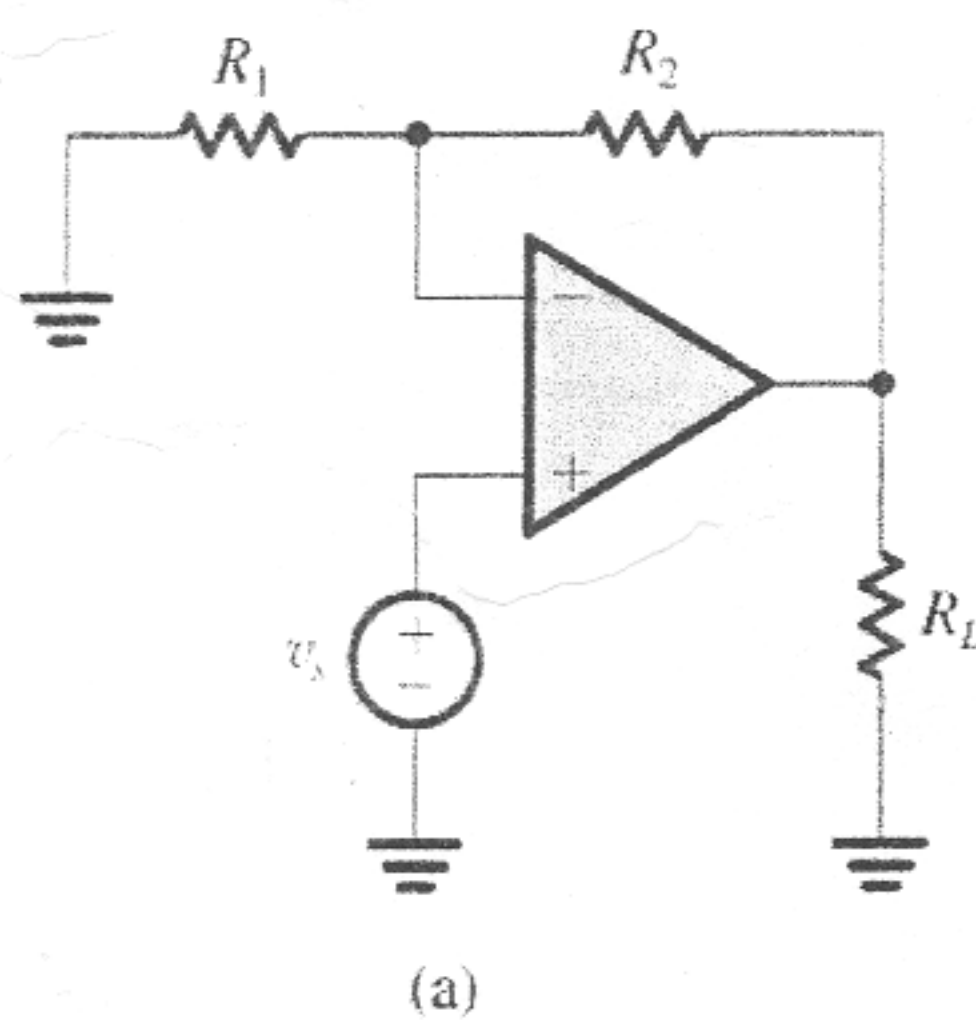


Figure 2