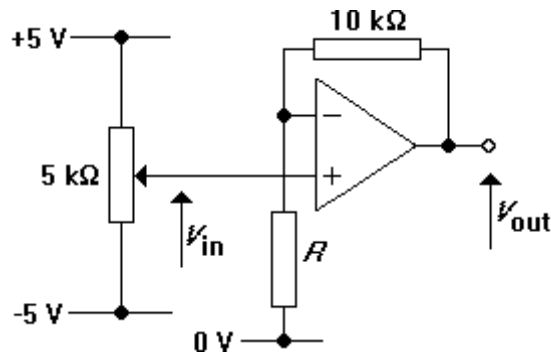
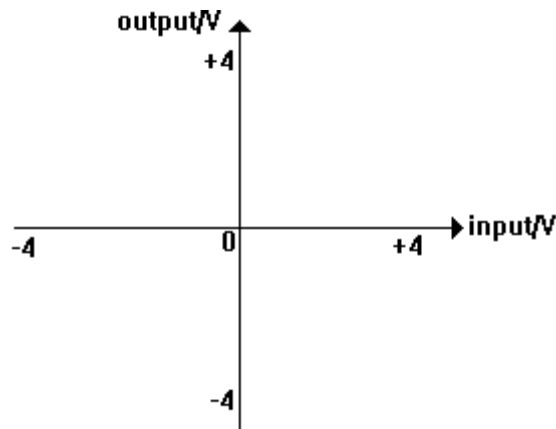


Non-inverting amplifiers

1. Construct the circuit shown below, with $R = 4.7 \text{ k}\Omega$.



2. Use a double-beam CRO to measure the values of V_{in} and V_{out} . If all is well, V_{out} should rise from about -3 V to $+4 \text{ V}$ as V_{in} is raised from -4 V to $+4 \text{ V}$.
3. Measure the value of V_{out} for values of V_{in} covering the range $+4.0 \text{ V}$ to -4.0 V at intervals of 0.5 V .
4. Plot your results on a $V_{out}-V_{in}$ graph. Join the points with three straight lines.



5. Calculate the voltage gain from the graph. Check that its value agrees with the formula $G = 1 + R_f/R_d$.
6. Repeat the experiment for $R = 10 \text{ k}\Omega$ and $1 \text{ M}\Omega$.