$$i = g_m(v_1 - v_2)$$

g_m

v_1 v_2 out

v_1 v_2

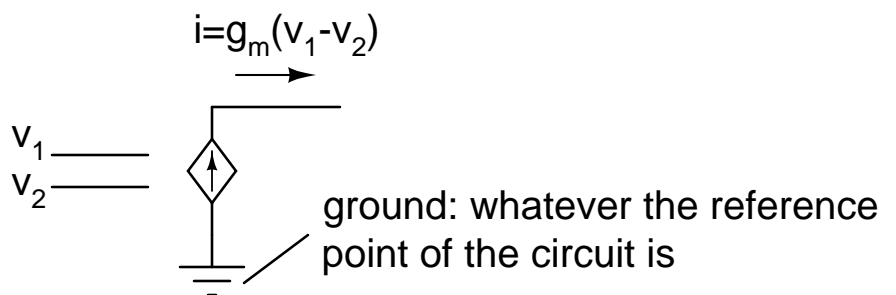ground: whatever the reference
point of the circuit is

"Transconductor"

equivalent circuit
and sign convention