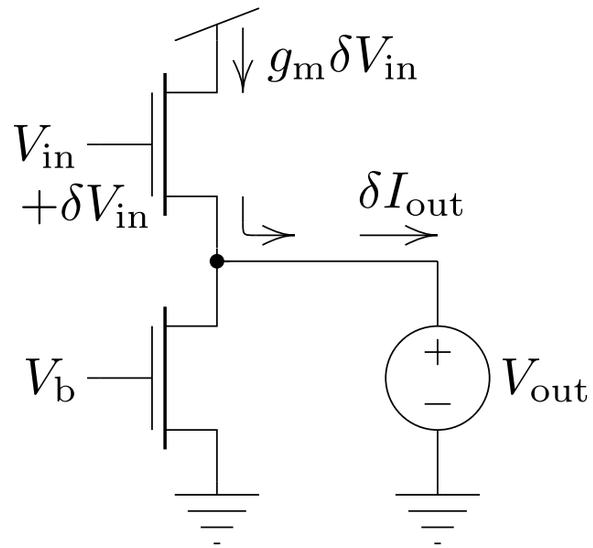
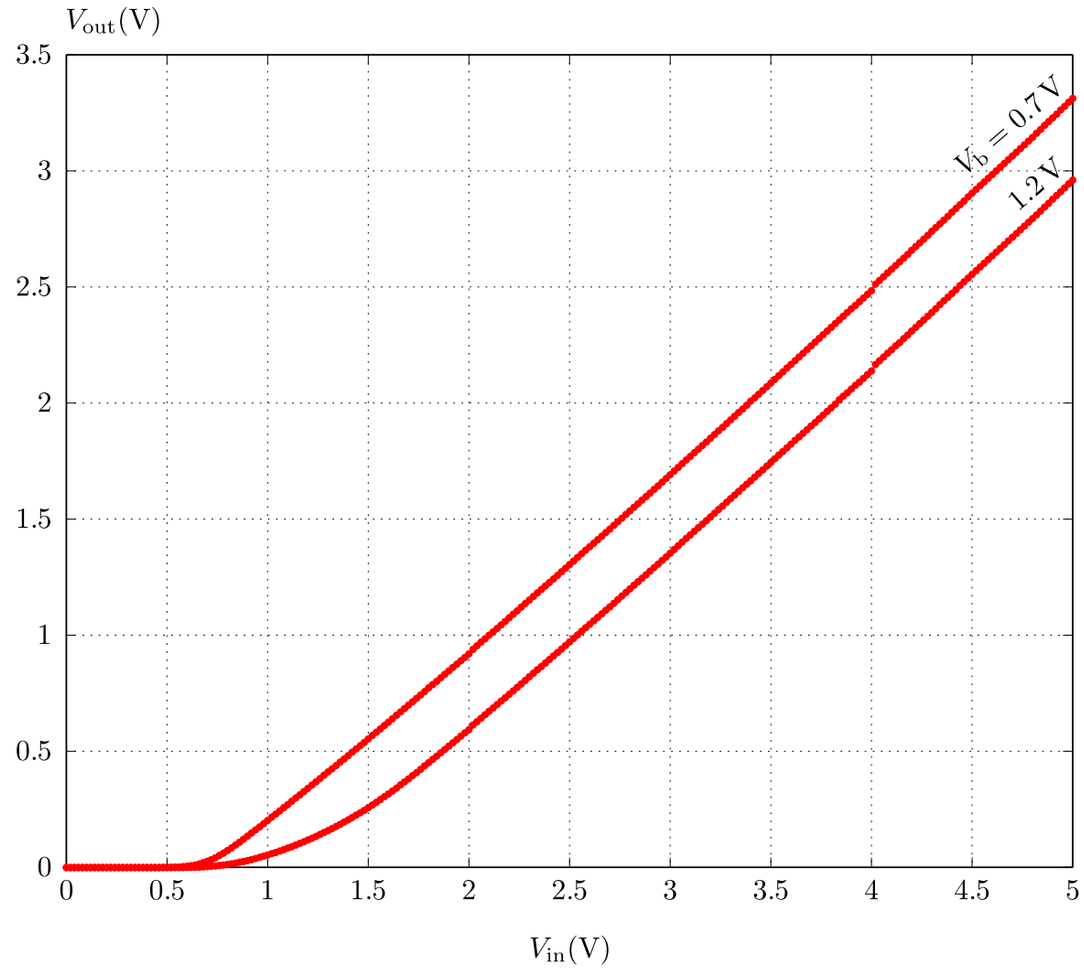
Node Fixing: Source Follower Voltage Gain



$$G_m = \frac{\delta I_{out}}{\delta V_{in}} = g_m$$



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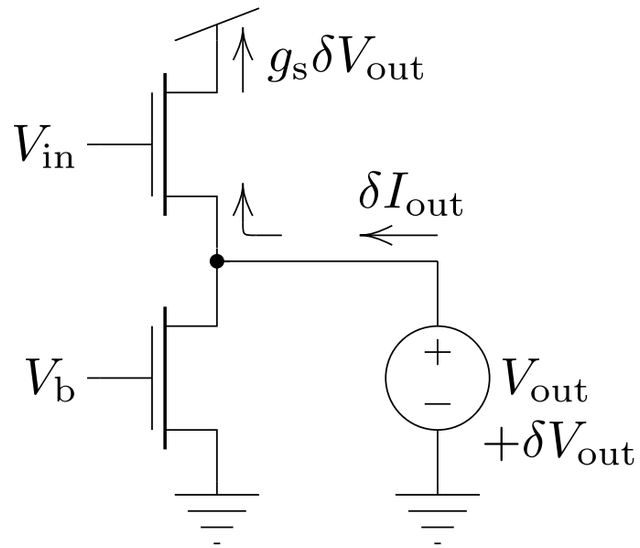
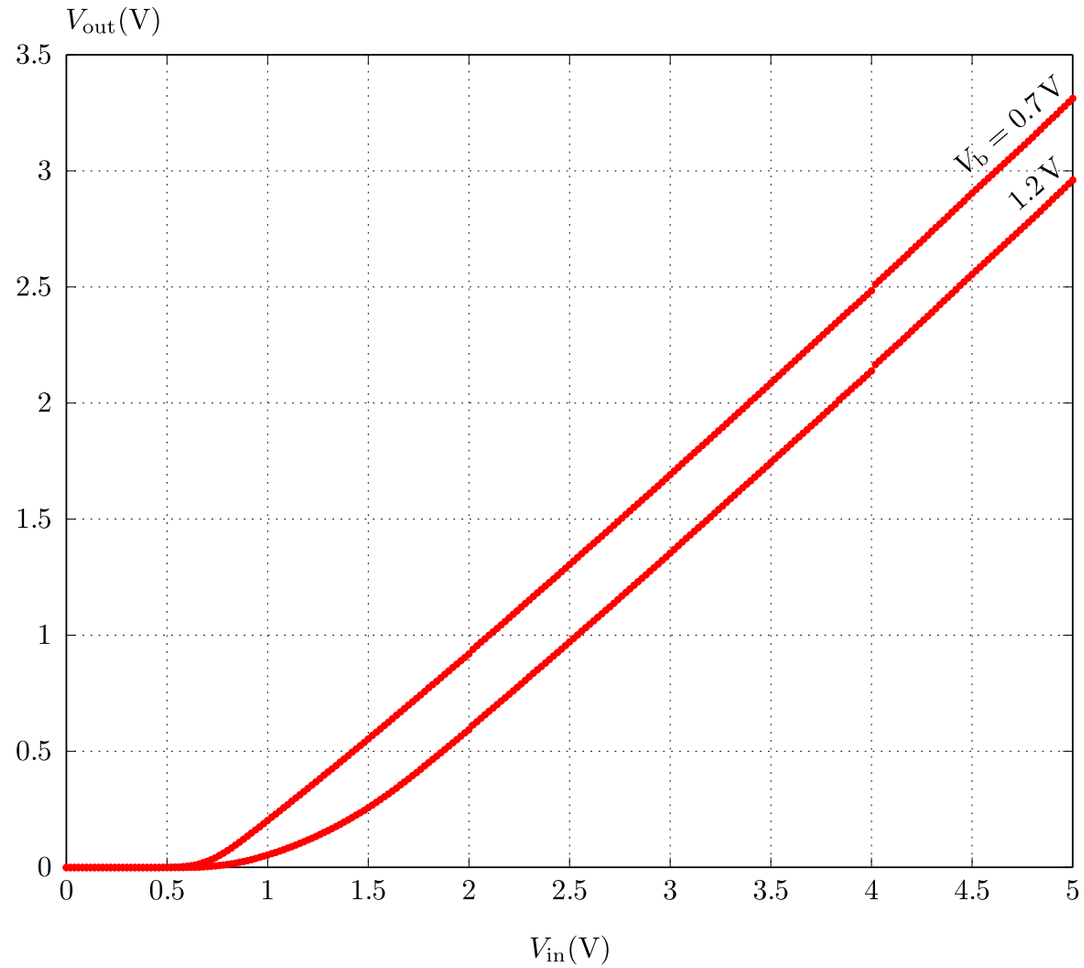
Node Fixing: Source Follower Voltage Gain



$$G_m = \frac{\delta I_{out}}{\delta V_{in}} = g_m \qquad R_{out} = \frac{\delta V_{out}}{\delta I_{out}} = \frac{1}{g_s}$$



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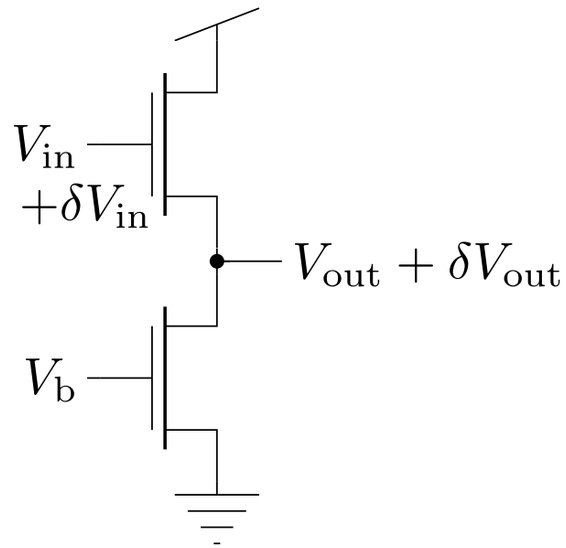
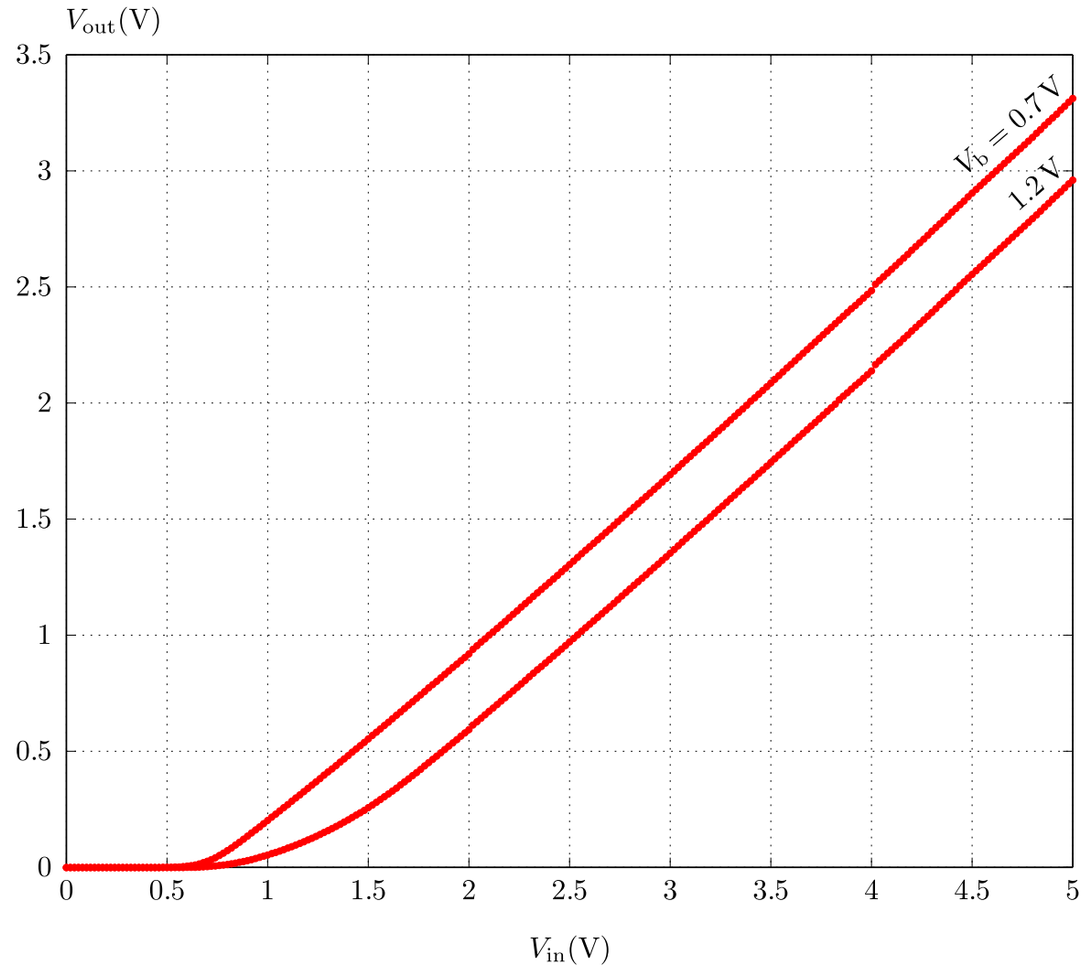


$$G_{\text{m}} = \frac{\delta I_{\text{out}}}{\delta V_{\text{in}}} = g_{\text{m}} \qquad R_{\text{out}} = \frac{\delta V_{\text{out}}}{\delta I_{\text{out}}} = \frac{1}{g_{\text{s}}}$$

$$A_{\text{v}} = \frac{\delta V_{\text{out}}}{\delta V_{\text{in}}} = G_{\text{m}} R_{\text{out}} = \frac{g_{\text{m}}}{g_{\text{s}}} = \kappa$$



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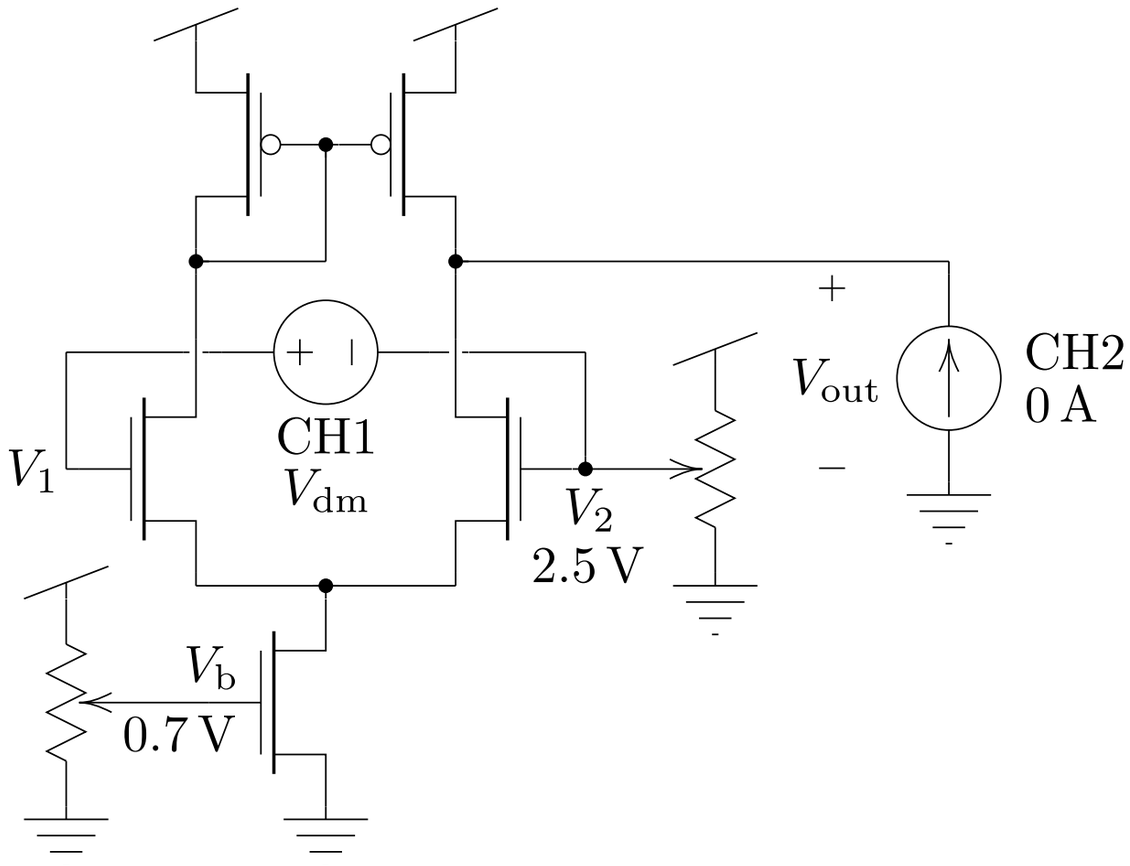
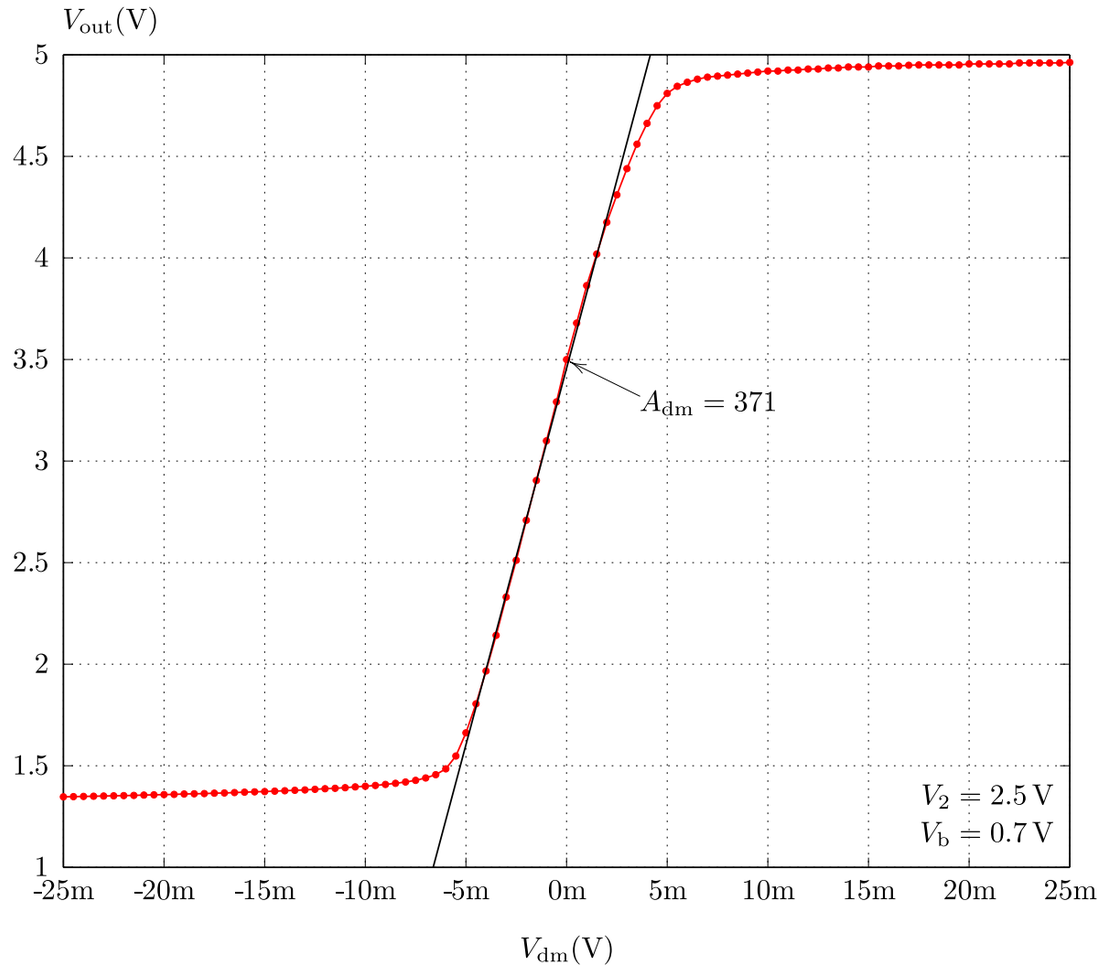
Differential Amplifier: Voltage Gain from VTC





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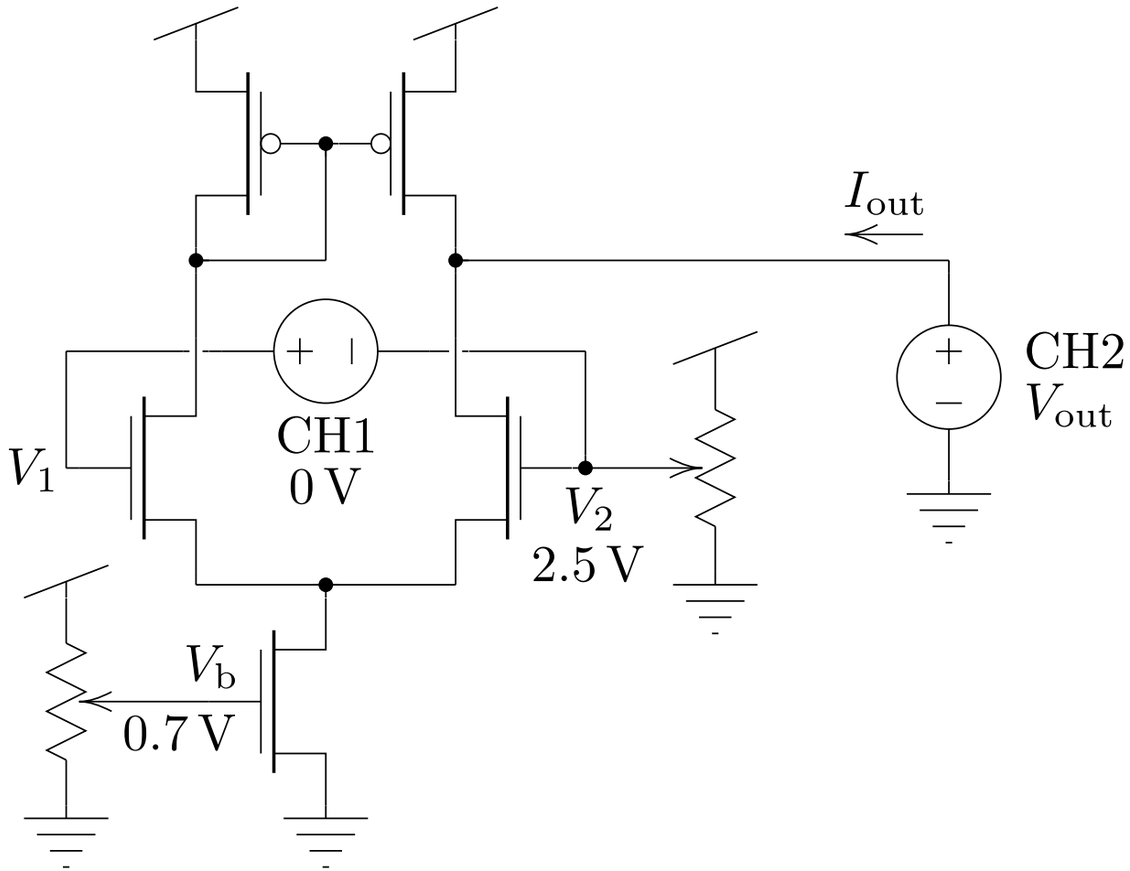
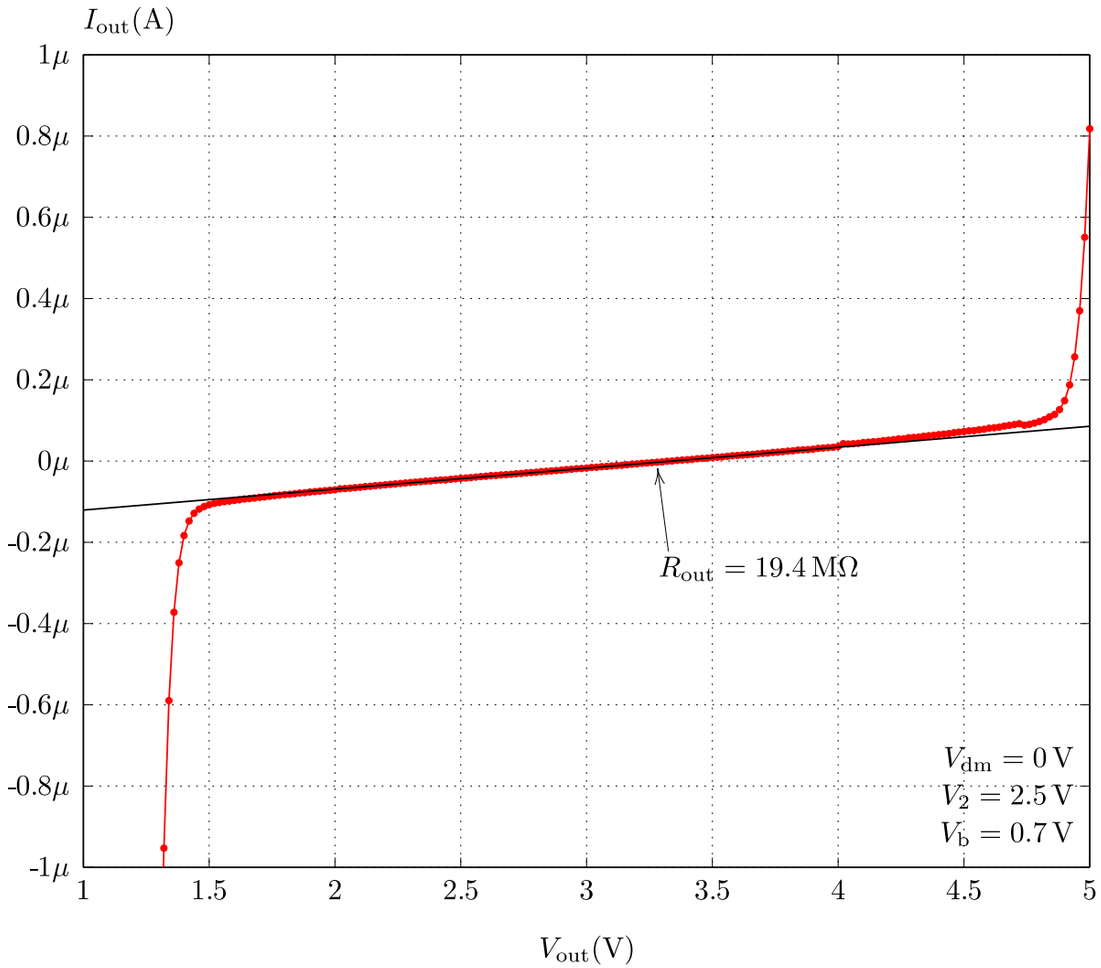
Differential Amplifier: Output Resistance





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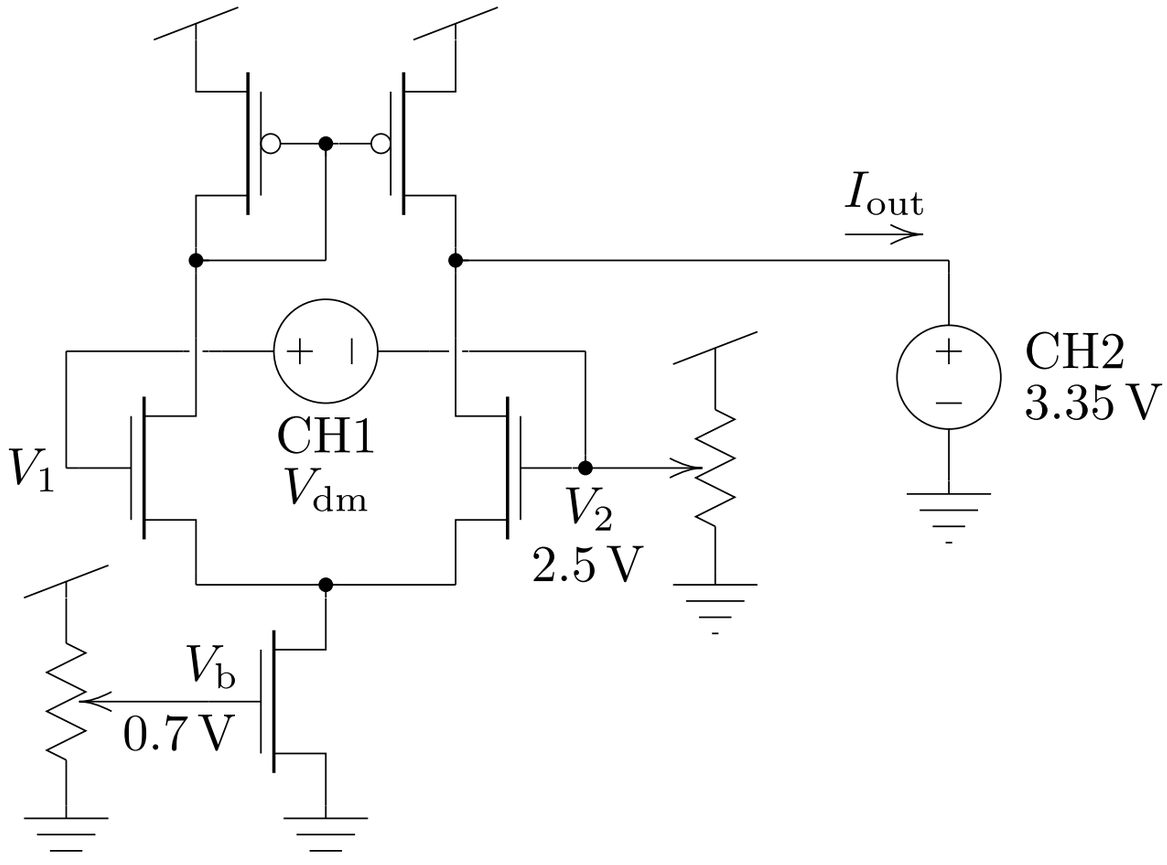
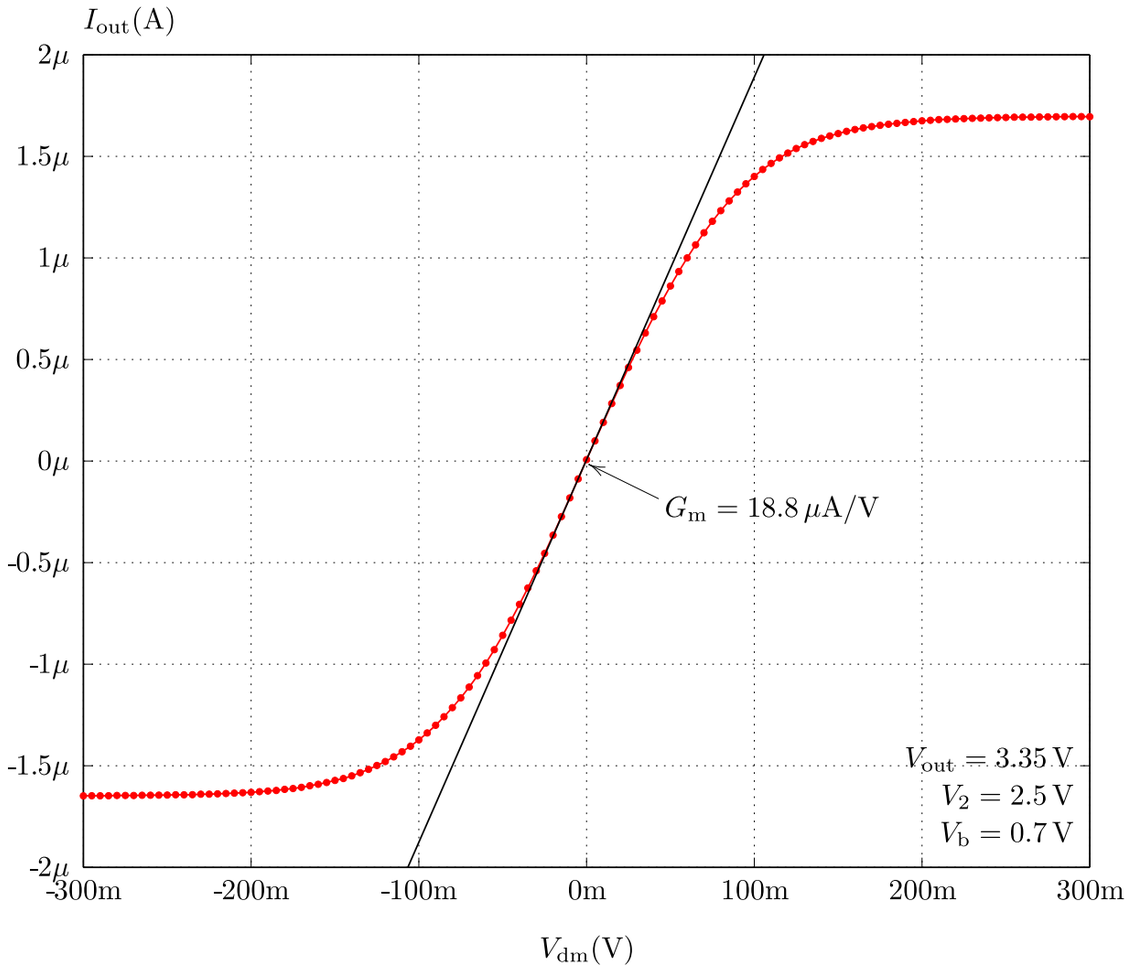
Differential Amplifier: Transconductance Gain





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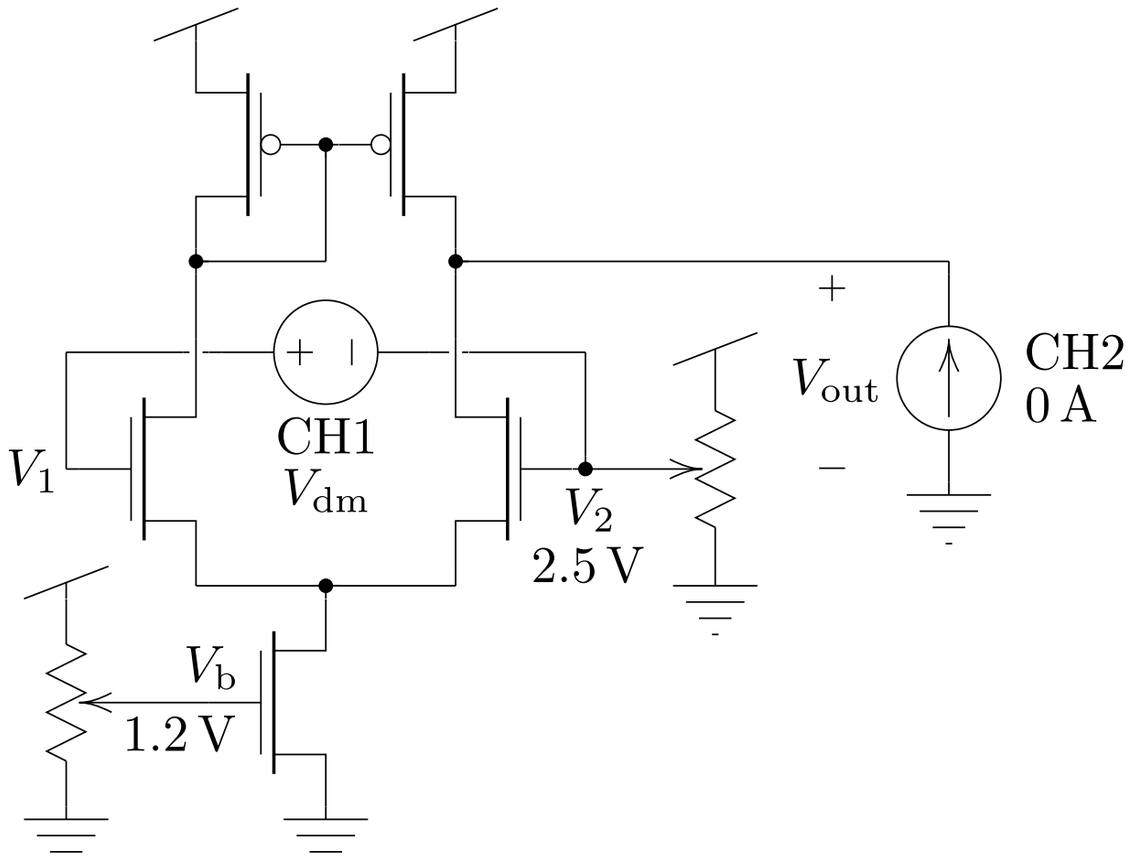
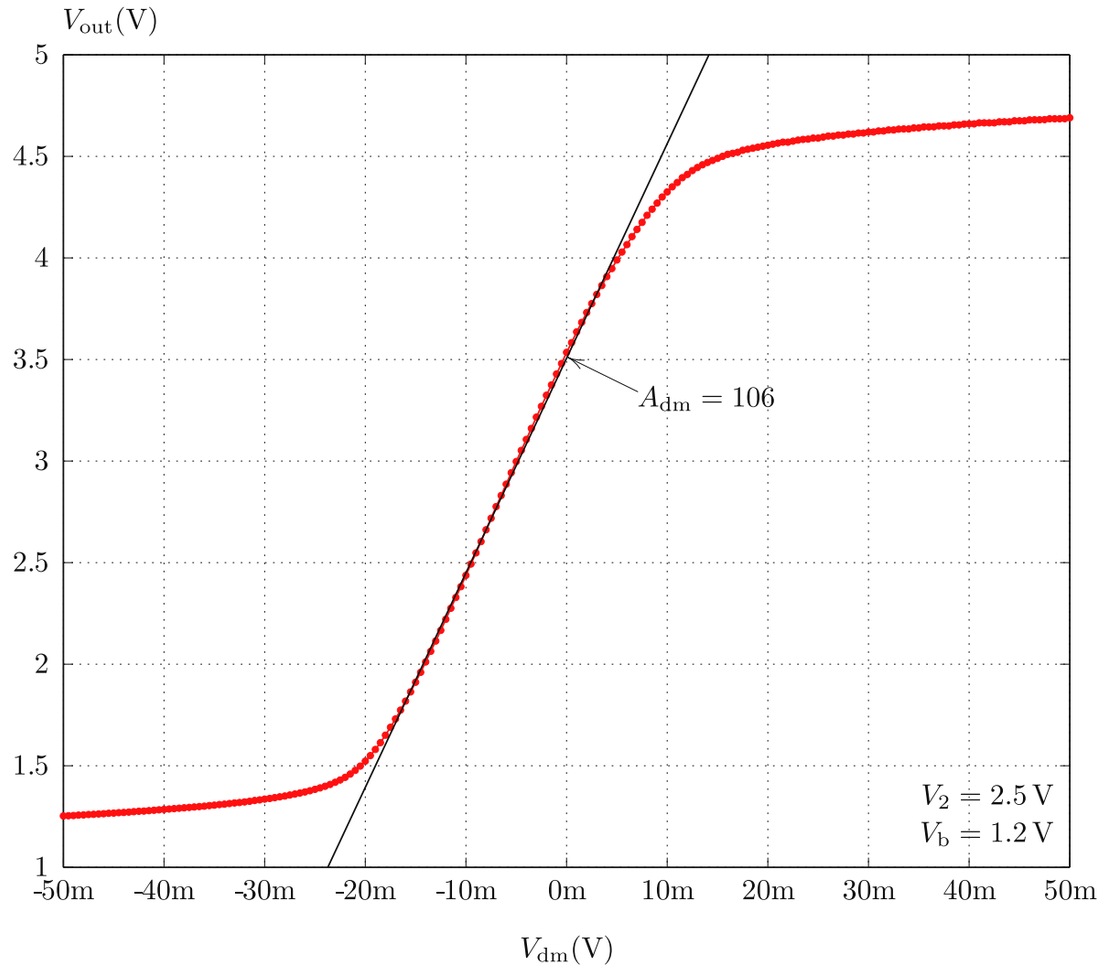
Differential Amplifier: Voltage Gain from VTC





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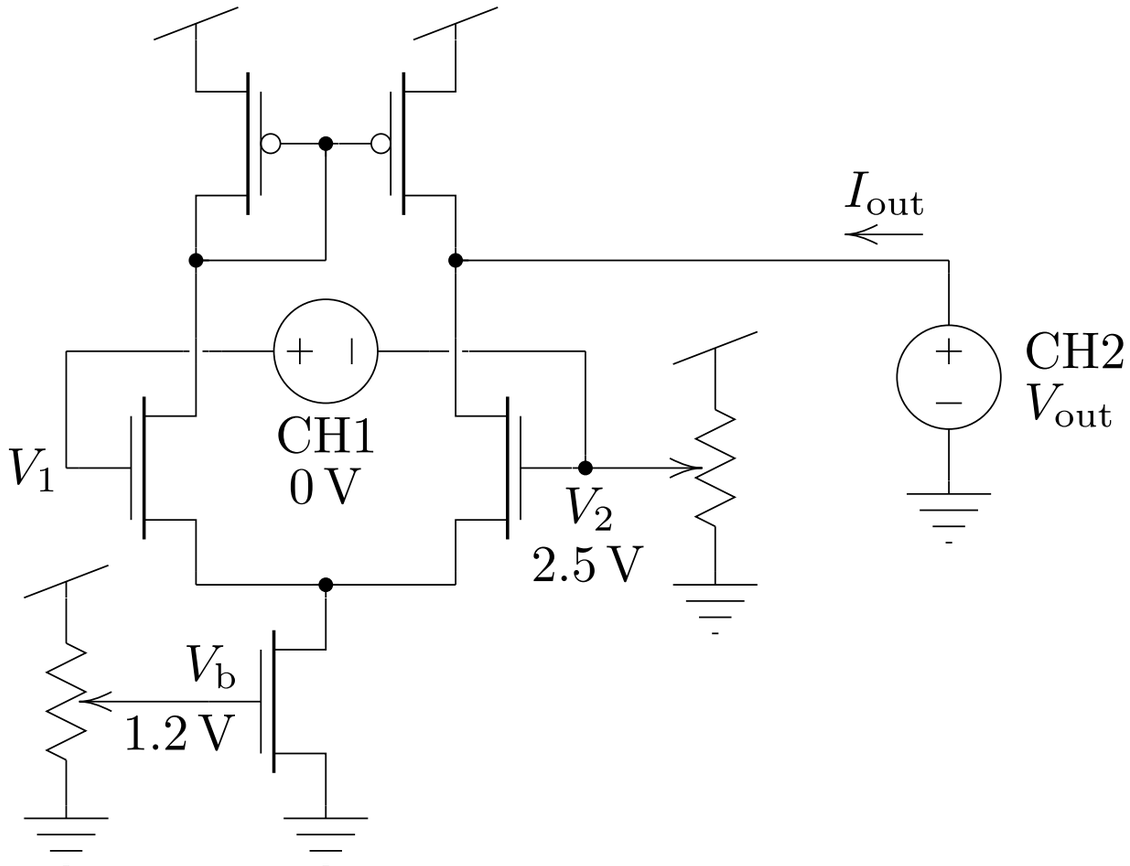
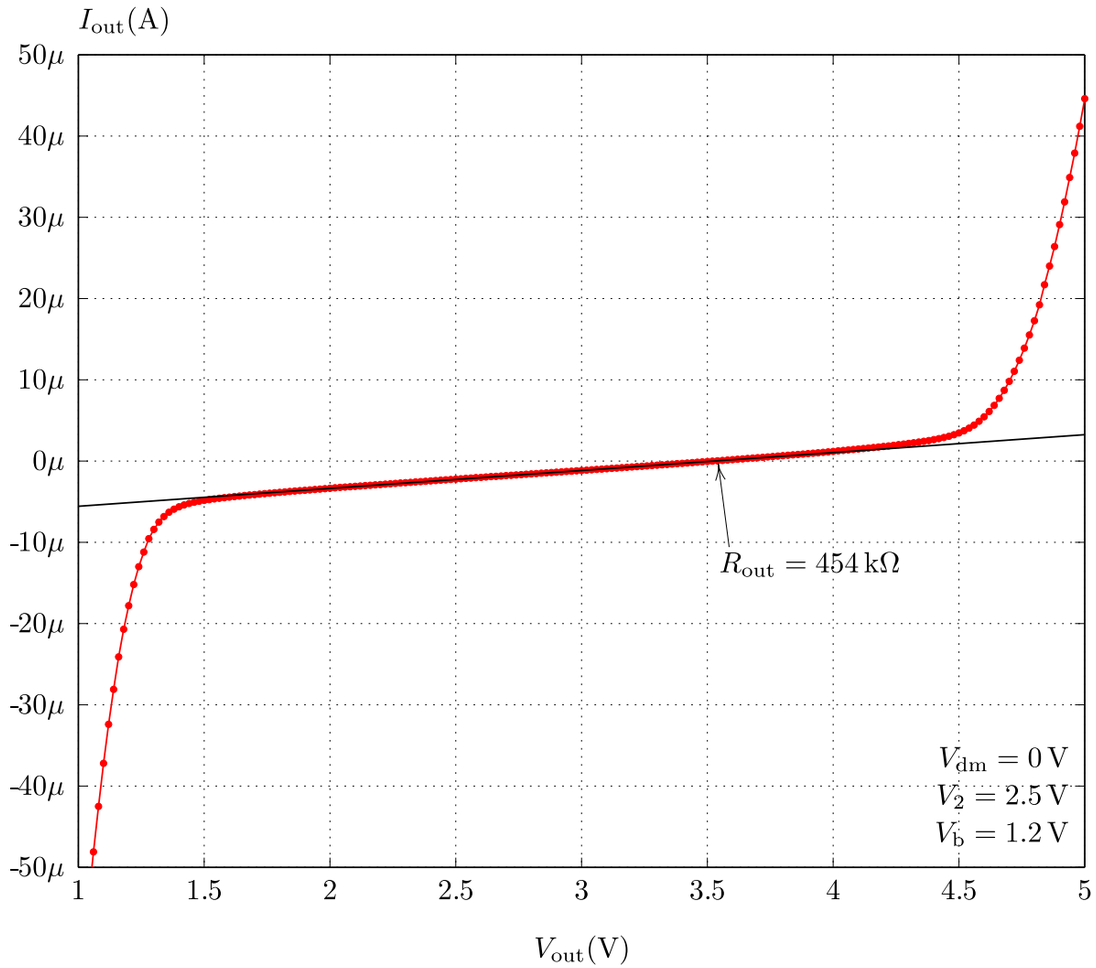
Differential Amplifier: Output Resistance





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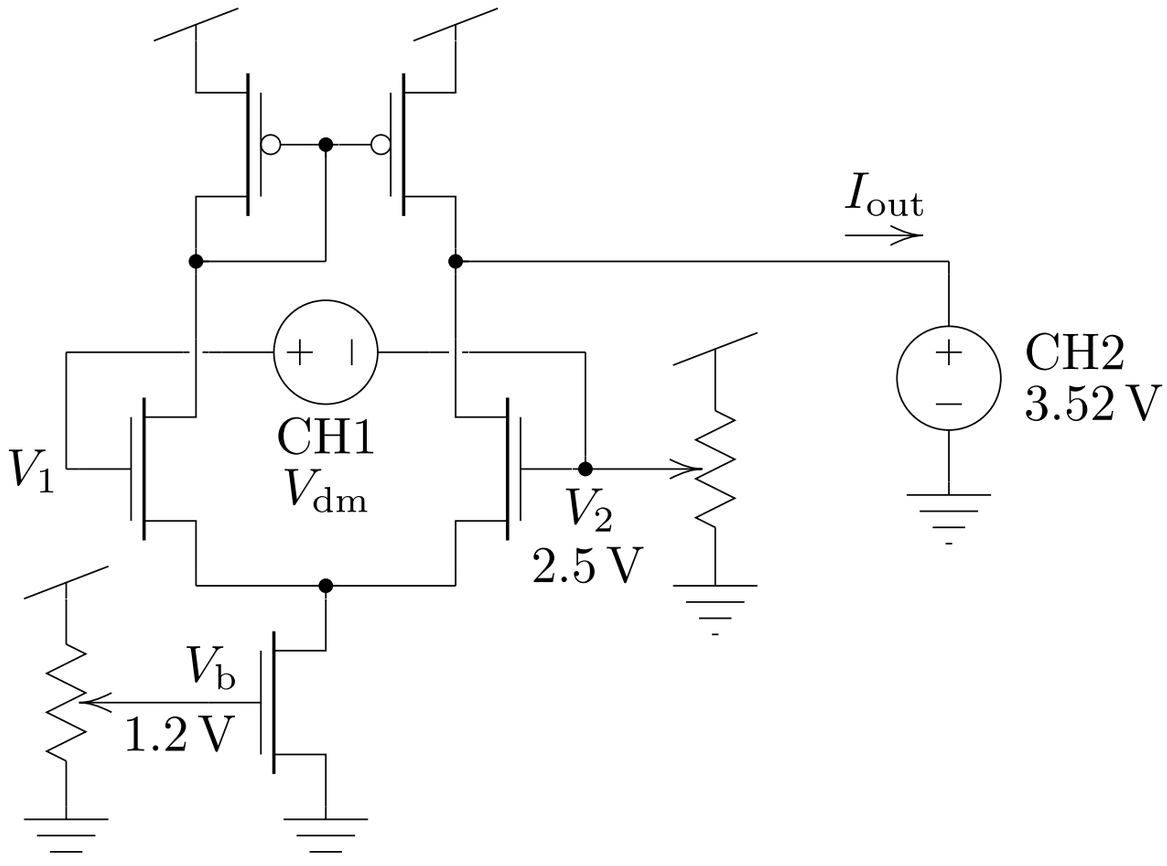
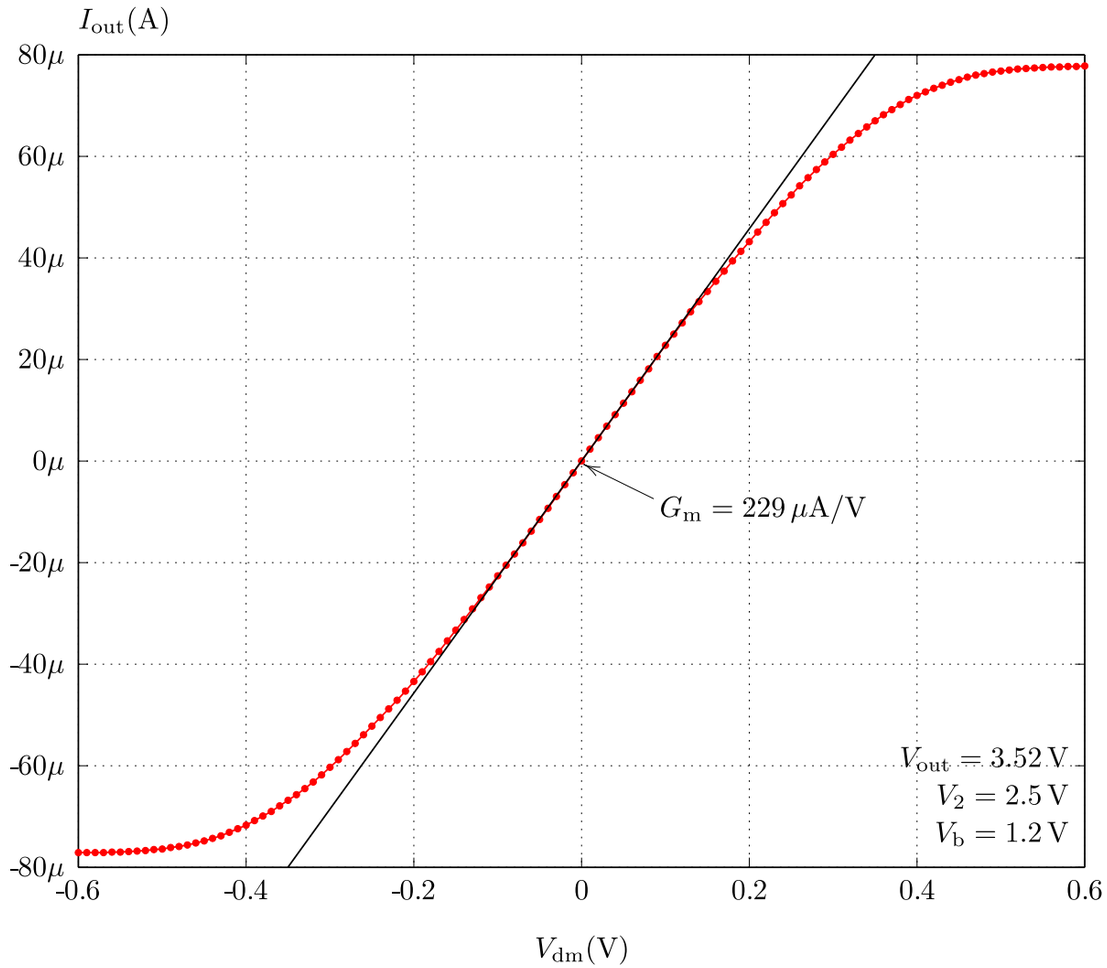
Differential Amplifier: Transconductance Gain





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