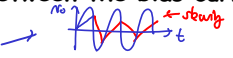
 **Actual Op Amps Are Not Ideal**

- Actual op amps, of course, are not ideal; rather, they ...
 - ↳ Generate noise
 - ↳ Have finite gain, A_o
 - ↳ Have finite bandwidth, ω_b
 - ↳ Have finite input resistance, R_i
 - ↳ Have finite input capacitance, C_i
 - ↳ Have finite output resistance, R_o
 - ↳ Have an offset voltage V_{OS} between their (+) and (-) terminals
 - ↳ Have input bias currents
 - ↳ Have an offset I_{OS} between the bias currents into the (+) and (-) terminals
 - ↳ Have finite slew rate 
 - ↳ Have finite output swing (governed by the supply voltage used, -L to +L)
- And what's worse: All of the above can be temperature (or otherwise environmentally) dependent!

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