

To: Gregory Kovacs <kovacs@cis.stanford.edu>  
From: Diane Shankle <shankle@ee.stanford.edu>  
Subject: Re: Quals Question 2003  
Cc:  
Bcc:  
X-Attachments:

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Greg Kovacs Quals Question 2003

The student was shown a schematic for a basic, no-tricks common-emitter amplifier using an NPN bipolar transistor. They were asked to determine the gain of the circuit from the information provided, which was fully adequate.

If finished in time, the student was shown an inverting op-amp circuit with a small-signal input signal and an offset voltage added to the positive op-amp terminal. The student was told the amplifier and all components were ideal, and asked to describe the output signal as accurately as possible.

If finished in time, the student was shown an op-amp voltage follower and a configuration with the positive input terminal tied to the output. The student was asked to comment in general terms on the behavior of the two circuits.