EE 201 - HW 4-2

In a classic feedback amplifier system as shown at right, an open-loop gain with a poor tolerance is being constrained using a feedback loop with a much better tolerance.



a. If the open-loop gain has a nominal value of 100 with a variance of $\pm 50\%$ and the feedback is perfect with a value of 0.0667, calculate the nominal, high, and low values of the closed-loop gain.

 $G_{low} =$ ____; $G_{nom} =$ ____; $G_{high} =$ _____; $G_{high} =$ ____; $G_{high} =$ _____; G_{high}

b. Now, what if the feedback circuit itself is not perfect, but instead has a nominal value of 0.0667 with $\pm 5\%$ variance? Calculate the possible high and low values of the closed-loop gain.

 $G_{low} =$ ____; $G_{high} =$ _____;