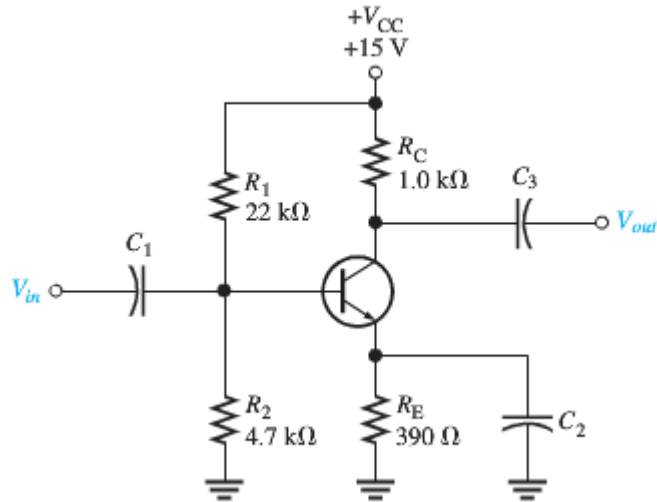
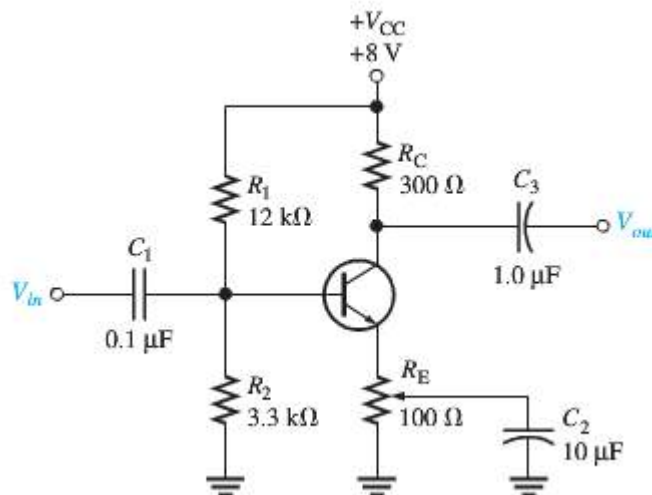


Answer the following questions:

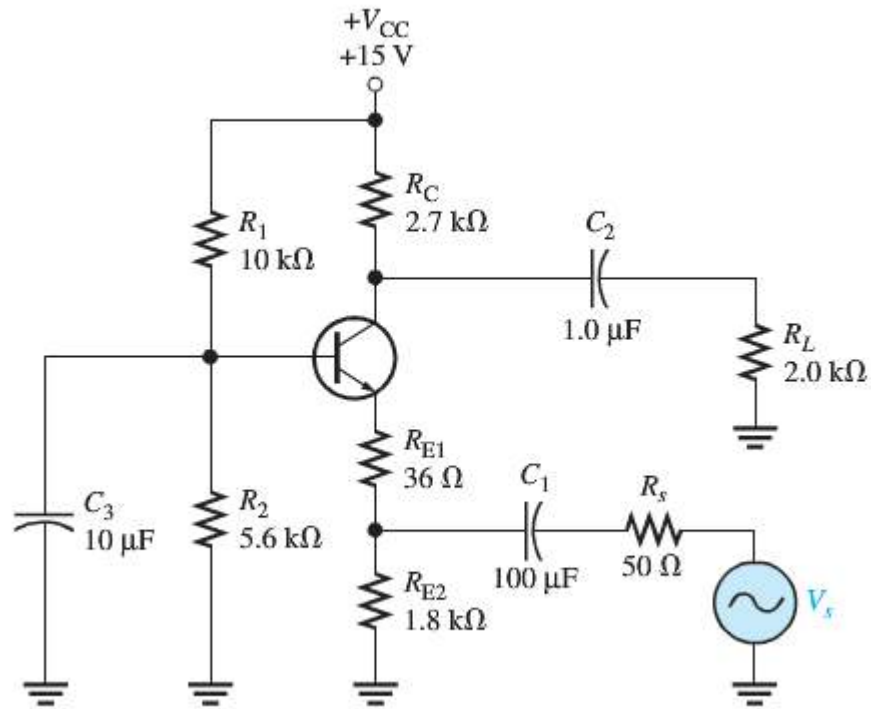
- Determine the voltage gain for the CE amplifier in the following figure.



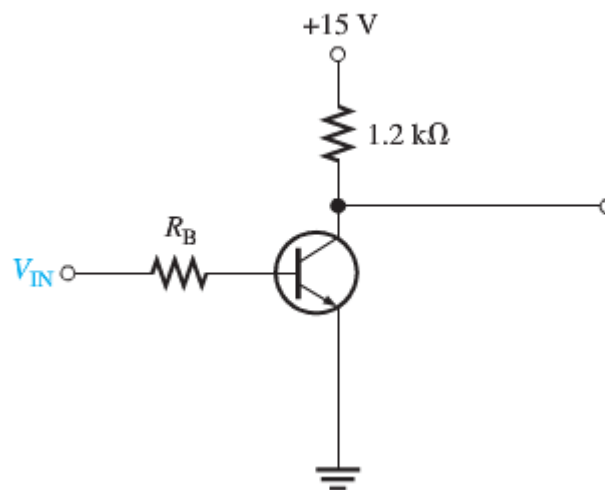
- If a load resistance of $600\ \Omega$ is placed on the output of the amplifier in the following figure, what is the maximum gain?



3. For the CB amplifier in the following figure, compute V_B , V_E , V_C , V_{CE} , r'_e , A_v .



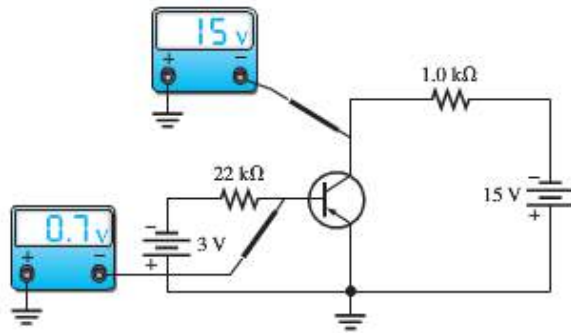
4. The transistor in the following figure has $\beta_{DC} = 100$. Determine the maximum value of R_B that will ensure saturation when V_{IN} is 5 V.



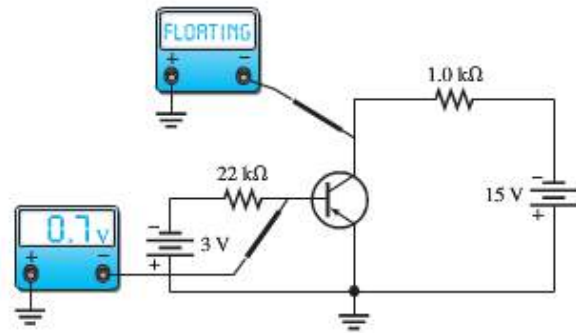
5. In an out of circuit *pnp* transistor, what should your readings be as your test across the terminals

of a good transistor, both in a forward- and a reverse-biased direction?

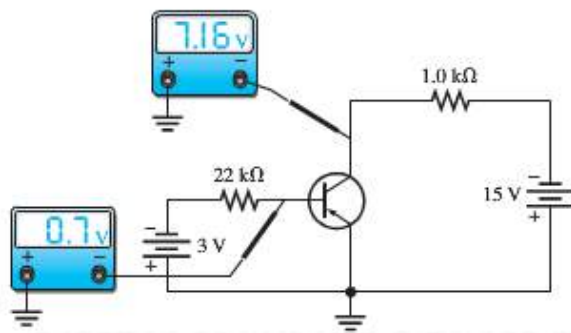
6. What is the most probable problem, if any, in each circuit of the following figure? Assume $\beta_{DC} = 75$.



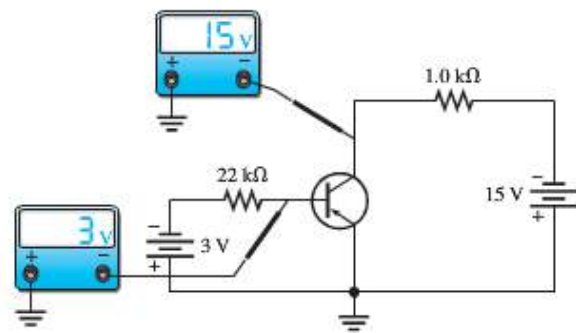
(a)



(b)

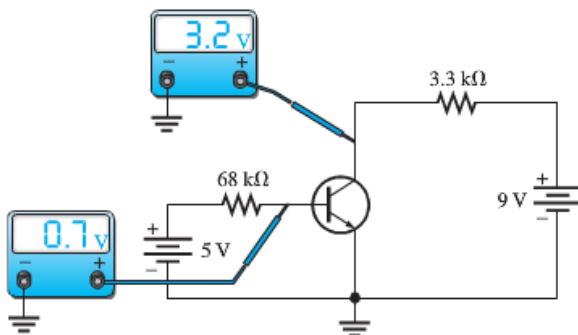


(c)

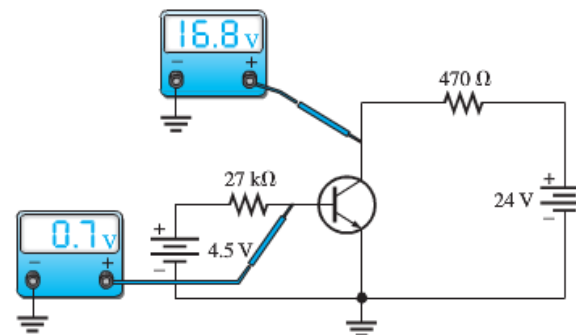


(d)

7. What is the value of the DC beta of each transistor in the following figure?



(a)



(b)

Source: Floyd, T. L., & Buchla, D. M. (2013). *Analog fundamentals: A systems approach* (1st ed.). Upper Saddle River, NJ: Prentice Hall.