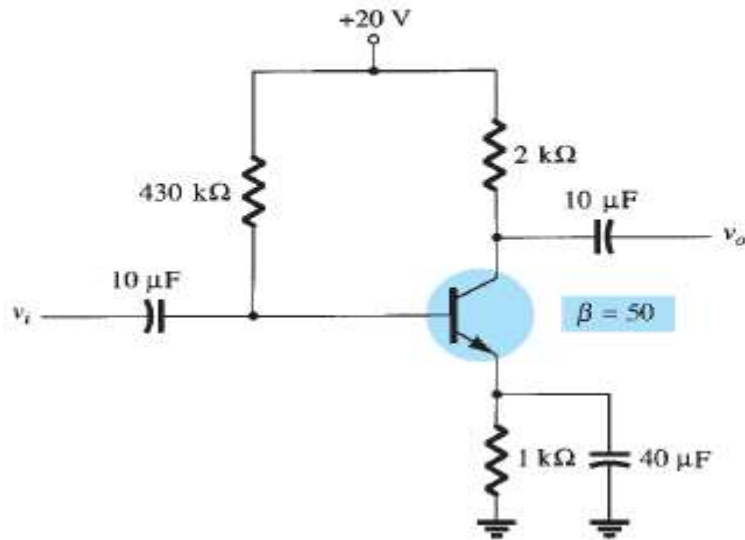


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(BOYLESTAD - Electronic Devices And Circuit Theory)

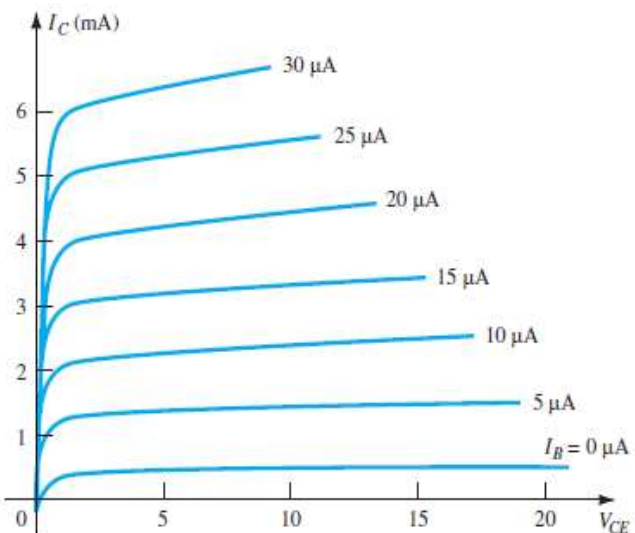
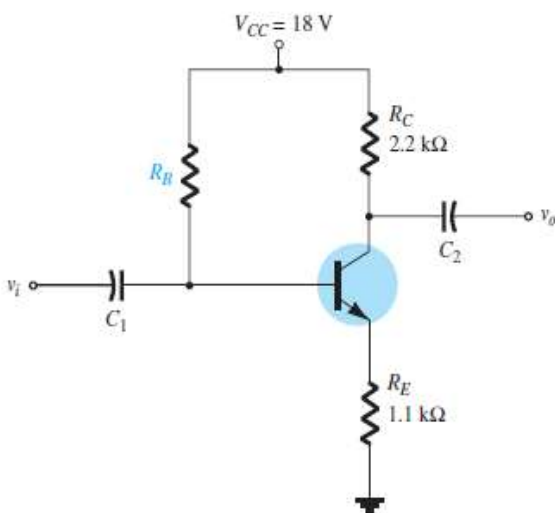
EXAMPLE 4.4 For the emitter-bias network of Fig. 4.23, determine:

- a. I_B .
- b. I_C .
- c. V_{CE} .
- d. V_C .
- e. V_E .
- f. V_B .
- g. V_{BC} .



EXAMPLE 4.7

- a. Draw the load line for the network of Fig. 4.26a on the characteristics for the transistor appearing in Fig. 4.26b.
- b. For a Q -point at the intersection of the load line with a base current of $15 \mu\text{A}$, find the values of I_{CQ} and V_{CEQ} .
- c. Determine the dc beta at the Q -point.
- d. Using the beta for the network determined in part c, calculate the required value of R_B and suggest a possible standard value.



EXAMPLE 4.14 Determine the dc level of I_B and V_C for the network of Fig. 4.42.

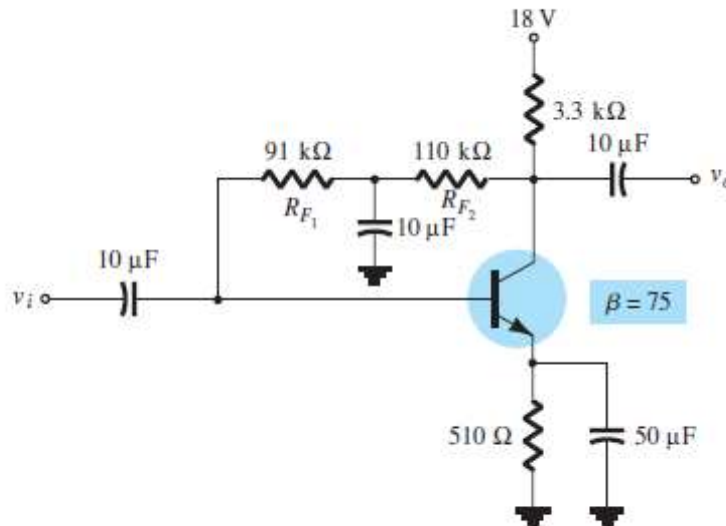


FIG. 4.42
Network for Example 4.14.

EXAMPLE 4.15 Given the network of Fig. 4.43 and the BJT characteristics of Fig. 4.44.

- Draw the load line for the network on the characteristics.
- Determine the dc beta in the center region of the characteristics. Define the chosen point as the Q -point.
- Using the dc beta calculated in part b, find the dc value of I_B .
- Find I_{CQ} and I_{CEQ} .

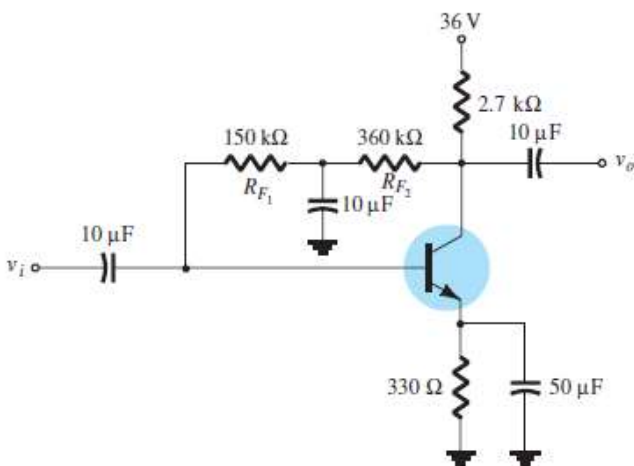


FIG. 4.43
Network for Example 4.15.

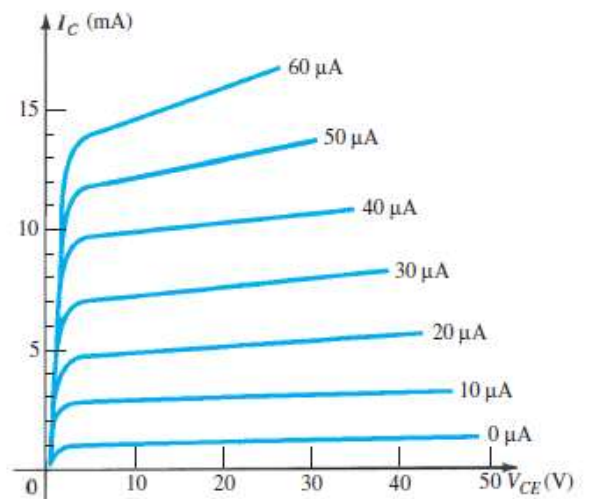


FIG. 4.44
BJT characteristics.