

1	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} y V_{CB} .	<p>$\beta = 100$</p>
2	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} y V_{CB} .	<p>$\beta = 100$</p>
3	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C y V_E .	<p>$+V_{CC} = 20\text{ V}$</p> <p>$R_B = 510\text{ k}$</p> <p>$R_C = 2,4\text{ k}$</p> <p>$\beta = 100$</p> <p>$R_E = 1,5\text{ k}$</p>
4	En el circuito de la figura calcular R_B , R_E , R_C , V_{CE} y V_B .	<p>$+V_{CC} = 12\text{ V}$</p> <p>$I_C = 2\text{ mA}$</p> <p>$V_C = 7,6\text{ V}$</p> <p>$\beta = 80$</p> <p>$V_E = 2,4\text{ V}$</p> <p>R_E</p>
5	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C y V_E .	<p>$+V_{CC} = 16\text{ V}$</p> <p>$R_B = 430\text{ k}$</p> <p>$R_C = 3,6\text{ k}$</p> <p>$\beta = 120$</p> <p>R_E</p>

6	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C , V_E y β .	
7	Calcular el valor máximo de R_B para que el transistor esté en saturación.	
8	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C , V_E y V_{CB} .	
9	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C , V_E y V_{CB} .	

10	Calcular los valores de R_C y R_2 .	<p>Circuit diagram for problem 10: A common-emitter circuit. The collector voltage V_C is given as 5 V. The base current I_B is given as 87.5 μA. The collector current I_C is calculated as $I_C = \beta I_B = 100 \times 87.5 \mu\text{A} = 8.75 \text{ mA}$. The collector resistor R_C is calculated as $R_C = \frac{V_{CC} - V_C}{I_C} = \frac{12 \text{ V} - 5 \text{ V}}{8.75 \text{ mA}} = 800 \text{ ohms}$. The base resistor R_2 is calculated as $R_2 = \frac{V_{CC}}{I_B} = \frac{12 \text{ V}}{87.5 \mu\text{A}} = 138 \text{ k ohms}$.</p>
11	En el circuito de la figura calcular los valores de R_1 , R_C y R_E para que el punto de funcionamiento del transistor sea $V_{CE} = 6 \text{ V}$, $I_C = 2 \text{ mA}$	<p>Circuit diagram for problem 11: A common-emitter circuit. The collector voltage V_C is given as 2 V. The collector current I_C is given as 2 mA. The base current I_B is calculated as $I_B = I_C / \beta = 2 \text{ mA} / 100 = 20 \mu\text{A}$. The base resistor R_1 is calculated as $R_1 = \frac{V_{CC} - V_E}{I_B} = \frac{16 \text{ V} - 2 \text{ V}}{20 \mu\text{A}} = 700 \text{ k ohms}$. The collector resistor R_C is calculated as $R_C = \frac{V_{CC} - V_C}{I_C} = \frac{16 \text{ V} - 2 \text{ V}}{2 \text{ mA}} = 7 \text{ k ohms}$. The emitter resistor R_E is calculated as $R_E = \frac{V_E}{I_E} = \frac{2 \text{ V}}{2 \text{ mA}} = 1 \text{ k ohms}$.</p>
12	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_{CB} , V_C y V_E .	<p>Circuit diagram for problem 12: A common-emitter circuit. The collector voltage V_C is given as 0 V. The collector current I_C is given as 3 mA. The base current I_B is calculated as $I_B = I_C / \beta = 3 \text{ mA} / 100 = 30 \mu\text{A}$. The base resistor R_1 is calculated as $R_1 = \frac{V_{CC} - V_E}{I_B} = \frac{12 \text{ V} - 0 \text{ V}}{30 \mu\text{A}} = 400 \text{ k ohms}$. The collector resistor R_C is calculated as $R_C = \frac{V_{CC} - V_C}{I_C} = \frac{12 \text{ V} - 0 \text{ V}}{3 \text{ mA}} = 4 \text{ k ohms}$. The emitter resistor R_E is calculated as $R_E = \frac{V_E}{I_E} = \frac{0 \text{ V}}{3 \text{ mA}} = 0 \text{ ohms}$.</p>
13	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_{CB} y V_{BE} .	<p>Circuit diagram for problem 13: A common-emitter circuit. The collector voltage V_C is given as 0 V. The collector current I_C is given as 3 mA. The base current I_B is calculated as $I_B = I_C / \beta = 3 \text{ mA} / 125 = 24 \mu\text{A}$. The base resistor R_B is calculated as $R_B = \frac{V_{BB} - V_E}{I_B} = \frac{-5 \text{ V} - 0 \text{ V}}{24 \mu\text{A}} = 208 \text{ k ohms}$. The collector resistor R_C is calculated as $R_C = \frac{V_{CC} - V_C}{I_C} = \frac{15 \text{ V} - 0 \text{ V}}{3 \text{ mA}} = 5 \text{ k ohms}$.</p>

14	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_C , V_E , V_{CB} y V_{BE} .	<p>$+V_{EE} = 10 \text{ V}$</p> <p>$R_E = 10 \text{ k}$</p> <p>$\beta = 100$</p> <p>$R_C = 5 \text{ k}$</p> <p>$-V_{CC} = -10 \text{ V}$</p>
15	En el circuito de la figura calcular I_B , I_C , I_E , V_{CE} , V_{CB} y V_{BE} .	<p>$+V_{EE} = 10 \text{ V}$</p> <p>$R_E = 1 \text{ k}$</p> <p>$\beta = 100$</p> <p>$V_{BB} = -5 \text{ V}$</p> <p>$R_B = 185 \text{ k}$</p>