

1. In a parallel circuit, the branch with the highest resistance always has the \_\_\_\_\_ amount of current.
2. As more branches are added to a parallel circuit the total current \_\_\_\_\_.
3. \_\_\_\_\_ law states that the total current in the main line in a parallel circuit equals the sum of the individual branch currents.
4. The type of circuit that is used to determine the value of an unknown resistance is called a \_\_\_\_\_ bridge.
5. \_\_\_\_\_ law states that the total voltage drop in a closed loop series circuit must equal the source voltage.
6. Calculate the total equivalent resistance in a series circuit with the following:  $V_s = 20V$ ,  $R_1 = 3k\Omega$ ,  $R_2 = 2k\Omega$ ,  $R_3 = 1k\Omega$
7. Calculate the total current in a series circuit with the following:  $V_s = 20V$ ,  $R_1 = 3k\Omega$ ,  $R_2 = 2k\Omega$ ,  $R_3 = 1k\Omega$
8. Calculate the total equivalent resistance in a parallel circuit with  $V_s = 20V$ ,  $R_1 = 3k\Omega$ ,  $R_2 = 2k\Omega$ ,  $R_3 = 1k\Omega$ . All three resistors are in parallel.
9. Calculate the total current in a parallel circuit with  $V_s = 20V$ ,  $R_1 = 3k\Omega$ ,  $R_2 = 2k\Omega$ ,  $R_3 = 1k\Omega$ . All three resistors are in parallel.
10. Calculate the total power dissipated in a parallel circuit with  $V_s = 20V$ ,  $R_1 = 3k\Omega$ ,  $R_2 = 2k\Omega$ ,  $R_3 = 1k\Omega$ . All three resistors are in parallel. Express the final answer in terms of Watts.