

FIGURE 7-1 A series-parallel circuit.

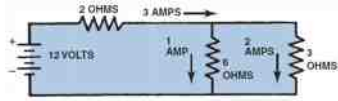


FIGURE 7-2 This complete headlight circuit with all bulbs and switches is a series-parallel circuit.

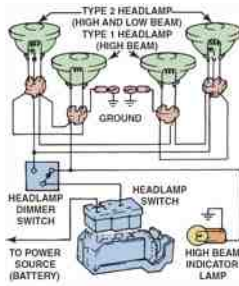


FIGURE 7-3 Solving a series-parallel circuit problem.

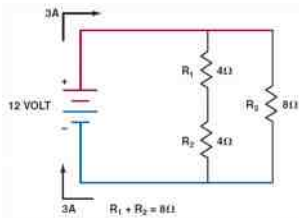


FIGURE 7-4 Example 1.

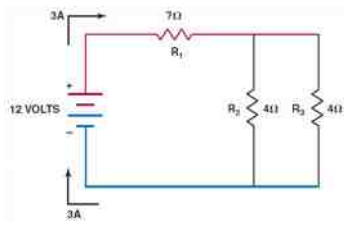


FIGURE 7-5 Example 2.

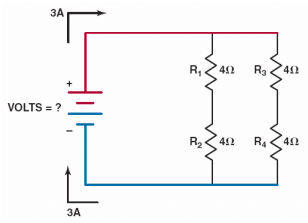


FIGURE 7-6 Example 3.

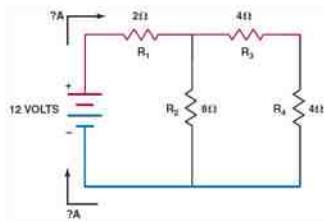


FIGURE 7-7 Example 4.

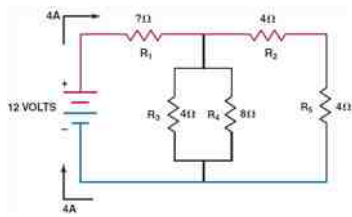
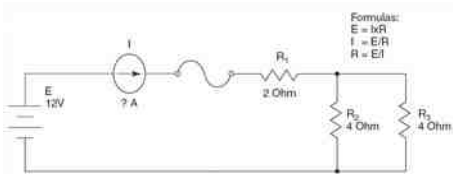


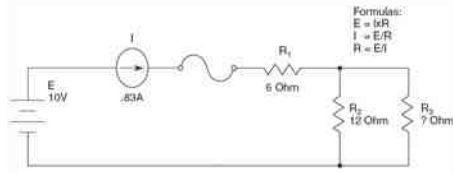
FIGURE 7-8 Chapter Quiz question 3.



E = 12V
 R₁ = 2 Ohm
 R₂ = 4 Ohm
 R₃ = 4 Ohm
 I = ? A

Formulas:
 E = I × R
 I = E / R
 R = E / I

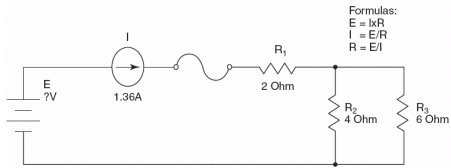
FIGURE 7-9 Chapter Quiz question 4.



E = 10V
 R₁ = 6 Ohm
 R₂ = 12 Ohm
 R₃ = 7 Ohm
 I = .83 A

Formulas:
 E = I × R
 I = E / R
 R = E / I

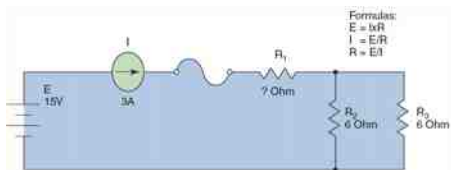
FIGURE 7-10 Chapter Quiz question 5.



Formulas:
 $E = I \times R$
 $I = E/R$
 $R = E/I$

$E = 7V$
 $R_1 = 2 \text{ Ohm}$
 $R_2 = 4 \text{ Ohm}$
 $R_3 = 6 \text{ Ohm}$
 $I = 1.36A$

FIGURE 7-11 Chapter Quiz question 6.



Formulas:
 $E = I \times R$
 $I = E/R$
 $R = E/I$

$E = 15V$
 $R_1 = ? \text{ Ohm}$
 $R_2 = 6 \text{ Ohm}$
 $R_3 = 6 \text{ Ohm}$
 $I = 3A$

FIGURE 7-12 Chapter Quiz question 7.



Formulas:
 $E = I \times R$
 $I = E/R$
 $R = E/I$

$E = 24V$
 $R_1 = 2 \text{ Ohm}$
 $R_2 = 4 \text{ Ohm}$
 $R_3 = 6 \text{ Ohm}$
 $R_4 = 8 \text{ Ohm}$
 $I = 7 \text{ A}$

FIGURE 7-13 Chapter Quiz question 8.

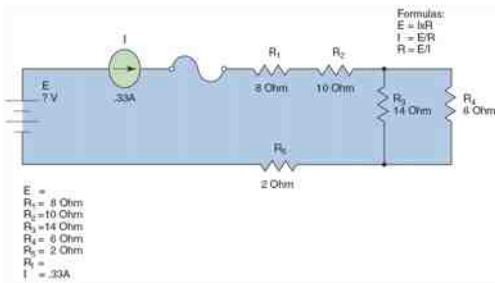


FIGURE 7-14 Chapter Quiz question 9.

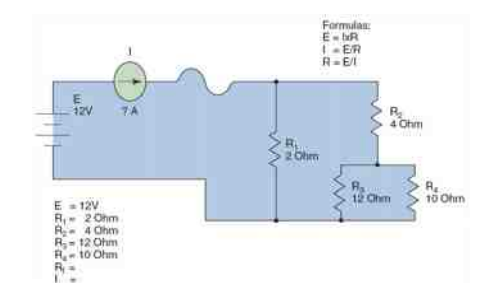


FIGURE 7-15 Chapter Quiz question 10.

