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| Lesson 5.6 | Homework |

Simplify the following radical expressions.

1.  2.  3. 

Simplify the following.

4.  5.  6. 

Simplify the following.

7.  8.  9. 

Identify the complex conjugate. Then find the product of the two complex numbers.

10.  11.  12. 

Write a complex number to represent the impedance of each element. The voltage V is the real number part, and the current I is the multiple of the imaginary unit i. V + Ii

13. V = 50 volts; I = 6 milliamperes

14. V = 29 volts; I = 3.1 milliamperes

The impedance of an element can be written in the form V + Ii. For two elements in series in a circuit, the total impedance is the sum of each element’s impedance. Find the total impedance of the two given elements if the elements are in series in a circuit.

15. V = 29 volts; I = 1.1 milliamperes

V = 27 volts; I = 0.9 milliamperes

16. V = 15.5 volts; I = 2 milliamperes

V = 23 volts; I = 2.3 milliamperes

16.

15.

14.

13.

12.