Wiki - Practice exercises for expressions

Solve each of the practice exercises below. Each problem includes two CodeSkulptor links: one for a template that you should use as a starting point for your solution and our solution to the exercise.

1. There are 5280 feet in a mile. Write a Python statement that calculates and prints the number of feet in 13 miles.

   Miles to feet template
   Miles to feet solution

2. Write a Python statement that calculates and prints the number of seconds in 7 hours, 21 minutes and 37 seconds.

   Hours to seconds template
   Hours to seconds solution

3. The perimeter of a rectangle is 2w+2h, where w and h are the lengths of its sides. Write a Python statement that calculates and prints the length in inches of the perimeter of a rectangle with sides of length 4 and 7 inches.

   Perimeter of rectangle template
   Perimeter of rectangle solution

4. The area of a rectangle is wh, where w and h are the lengths of its sides. Note that the multiplication operation is not shown explicitly in this formula. This is standard practice in mathematics, but not in programming. Write a Python statement that calculates and prints the area in square inches of a rectangle with sides of length 4 and 7 inches.

   Area of rectangle template
   Area of rectangle solution

5. The circumference of a circle is 2πr where r is the radius of the circle. Write a Python statement that calculates and prints the circumference in inches of a circle whose radius is 8 inches. Assume that the constant π=3.14.

   Circumference of circle template
   Circumference of circle solution

6. The area of a circle is πr2 where r is the radius of the circle. (The raised 2 in the formula is an exponent.) Write a Python statement that calculates and prints the area in square inches of a circle whose radius is 8 inches. Assume that the constant π=3.14.

   Area of circle template
   Area of circle solution

7. Given p dollars, the future value of this money when compounded yearly at a rate of r percent interest for y years is p(1+0.01r)y. Write a Python statement that calculates and prints the value of 1000 dollars compounded at 7 percent interest for 10 years.

   Future value template
   Future value solution

8. Write a single Python statement that combines and the three strings "My name is", "Joe" and

"Warren" into one larger string "My name is Joe Warren." and prints the result.

Name tag template
Name tag solution

9. Write a Python expression that combines the string "Joe Warren is 52 years old." from the string "Joe Warren" and the number 52 and then prints the result (Hint: Use the function `str` to convert the number into a string.)

   Name and age template
   Name and age solution

10. The distance between two points (x0,y0) and (x1,y1) is (x0−x1)2+(y0−y1)2. Write a Python statement that calculates and prints the distance between the points (2,2) and (5,6).

    Point distance template
    Point distance solution