Practice Exercises for Expressions

1. There are 5280 feet in a mile. Write a Python statement that calculates and prints the number of feet in 13 miles
2. Write a Python statement that calculates and prints the number of seconds in 7 hours, 21 minutes and 37 seconds.
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.
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.
5. The circumference of a circle is $2\pi r$ 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 $\pi=3.14$.
6. The area of a circle is πr^2 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 $\pi=3.14$.
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.
8. Write a single Python statement that combines the three strings "My name is", "Joe" and "Warren" (plus a couple of other small strings) into one larger string "My name is Joe Warren." and prints the result.
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.)
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 $(5,6)$.