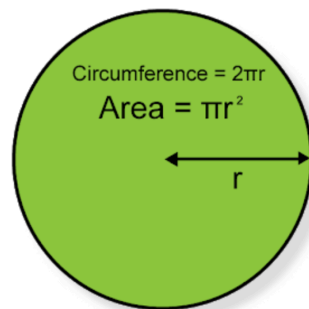


Unit Title: Client Side Scripting for Web Applications

Unit No: HF4X 34

Functions & Passing Parameters

{ CIRCLE TASK }



Calculate

**TASK 1**

Use the file `functionsCircle.html` and write code that calls 2 functions when the user clicks on the `Calculate` button. The functions are to do the following

1. Function to calculate the **area** of a circle using the radius entered by the user.
 - a. The radius should be passed to the function as an argument.
 - b. The formula for calculating the area of a circle is πr^2 .
 - c. The value of π is 3.14
2. Function to calculate the **circumference** of a circle using the radius entered by the user.
 - a. The radius should be passed to the function as an argument.
 - b. The formula for calculating the area of a circle is $2\pi r$.
 - c. The value of π is 3.14
3. Feedback should be given to the user in the area provided. The feedback should take the form: -

The area of the circle is XXX.XX

The circumference of the circle is YY.YY

HINT: You may find at times that you get a number which has a lot of digits after the decimal point. If this happens try researching the JavaScript `toFixed()` method to limit the number of digits after the decimal point. Set this to show a number with 3 decimal points.

The area of the circle is 16.610599999999998

The circumference of the circle is 14.443999999999999

**TASK 2**

Add some validation to the input.

- Ensure that the input field is not empty. (i.e. that the user has entered a value). Display an appropriate message if the field is blank.
- Ensure that the user has input a number. Display an appropriate message if a number is not entered.

**TASK 3**

If you have not already done so, rewrite your functions so that they return the value that has been calculated (the area and the circumference). You may need to restructure your code to get this working properly.

HINT: See the `Function Return` section of the w3schools page

https://www.w3schools.com/js/js_functions.asp