MATH METHODS

1. Write a program that takes a **positive integer** from user & display the following in your browser.
   a. number
   b. round off value of the number
   c. floor value of the number
   d. ceil value of the number

```
// ASSIGNMENT
let num=+prompt("Enter positive integer:")
document.write("Number: "+num+"<br>")
document.write("Round off value: "+Math.round(num)+"<br>")
document.write("Floor value : "+Math.floor(num)+"<br>")
document.write("Ceil value : "+Math.ceil(num))
```

number: 3.45214
round off value: 3
floor value: 3
ceil value: 4

2. Write a program that takes a **negative floating point** number from user & display the following in your browser.

a. number

b. round off value of the number

c. floor value of the number

d. ceil value of the number

```
// ASSIGNMENT
let num=+prompt("Enter negative integer:")
document.write("Number: "+num+"<br>")
document.write("Round off value: "+Math.round(num)+"<br>")
document.write("Floor value : "+Math.floor(num)+"<br>")
document.write("Ceil value : "+Math.ceil(num))
```

number: -2.673

round off value: -3

floor value: -3

ceil value: -2

3. Write a program that displays the absolute value of a number.
   E.g. absolute value of -4 is 4 & absolute value of 5 is 5

```
// ASSIGNMENT
let num=+prompt("Enter a number:")
document.write("Numbers absolute value is : "+Math.abs(num))
```

The absolute value of -4 is 4

4. Write a program that simulates a dice using random()
method of JS Math class. Display the value of dice in your
browser.:

```javascript
// ASSIGNMENT
let num=+prompt("Enter count of dice roll:")
for (let index = 0; index < num; index++) {
document.write("Dice value is : "+Math.round(Math.random()*6)+"<br>")

}
```

random dice value: 4

random dice value: 6

5. Write a program that simulates a coin toss using random() method of JS Math class. Display the value of coin in your browser

```javascript
// ASSIGNMENT
let num=+prompt("Enter how many times you want to toss coin:")
for (let index = 0; index < num; index++) {
    let num1=Math.floor(Math.random()*2)+1;
if (num1===1) {
document.write("Coin is : "+num1+"<br>")

    document.write("Coin value is: tail <br>")
}
else{
document.write("Coin is : "+num1+"<br>")

    document.write("Coin value is: head <br>")

}

}
```

2
random coin value: Heads

1
random coin value: Tails

6. Write a program that shows a random number between 1 and 100 in your browser.

```
// ASSIGNMENT
alert("Random number between 1-100:"+Math.floor(Math.random()*100+1))
```
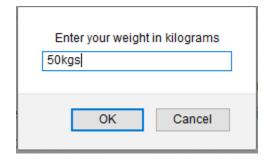
random number between 1 and 100: 84

7. Write a program that asks the user about his weight. Parse the user input and display his weight in your browser. Possible user inputs can be:
   a. 50
   b. 50kgs
   c. 50.2kgs
   d. 50.2kilograms

```javascript
// ASSIGNMENT
const weightInput = prompt("What is your weight?");

let weightInKgs;
if (weightInput.includes("kgs")) {
  weightInKgs = parseFloat(weightInput.replace("kgs", ""));
} else if (weightInput.includes("kilograms")) {
  weightInKgs = parseFloat(weightInput.replace("kilograms", ""));
} else {
  weightInKgs = parseFloat(weightInput);
}

document.write(`Your weight is ${weightInKgs} kgs.`);
```

Enter your weight in kilograms

50kgs|

OK   Cancel

The weight of user is 58.3 kilograms

8. Write a program that stores a random secret number from 1 to 10 in a variable. Ask the user to input a number between 1 and 10. If the user input equals the secret number, congratulate the user.

```javascript
// ASSIGNMENT
let secretNum=Math.floor(Math.random()*10+1);
let userGuess=+prompt("Enter your guess between 1-10:")
while(userGuess!==secretNum){
    alert("wrong guess")
    userGuess=+prompt("Enter your guess again between 1-10:")
}
alert("right guess")
```

Try again!

☐ Prevent this page from creating additional dialogs

OK

Enter a number between 1 and 10

6|

OK   Cancel