//JavaScript Math Object

// The JavaScript Math object allows you to perform mathematical tasks on numbers.

//Example:

// console.log(Math.PI);

// The Math Object

// Unlike other objects, the Math object has no constructor.

// The Math object is static.

// All methods and properties can be used without creating a Math object first.

// Math Properties (Constants)

// The syntax for any Math property is : Math.property.

// JavaScript provides 8 mathematical constants that can be accessed as Math properties:

// Example

// Math.E        // returns Euler's number

// Math.PI       // returns PI

// Math.SQRT2    // returns the square root of 2

// Math.SQRT1\_2  // returns the square root of 1/2

// Math.LN2      // returns the natural logarithm of 2

// Math.LN10     // returns the natural logarithm of 10

// Math.LOG2E    // returns base 2 logarithm of E

// Math.LOG10E   // returns base 10 logarithm of E

// Math Methods

// The syntax for Math any methods is : Math.method(number)

// Number to Integer

// There are 4 common methods to round a number to an integer:

// Math.round(x)    Returns x rounded to its nearest integer

// Math.ceil(x) Returns x rounded up to its nearest integer

// Math.floor(x)    Returns x rounded down to its nearest integer

// Math.trunc(x)    Returns the integer part of x (new in ES6)

// Math.round()

// Math.round(x) returns the nearest integer:

//Example

// console.log(Math.round(4.1));

// console.log(Math.round(4.6));

// Math.ceil()

// Math.ceil(x) returns the value of x rounded up to its nearest integer:

// Example

// console.log(Math.ceil(4.9));

// console.log(Math.ceil(4.7));

// console.log(Math.ceil(4.4));

// console.log(Math.ceil(4.2)); //--- up : 5

// console.log(Math.ceil(-4.2));

// Math.floor()

// Math.floor(x) returns the value of x rounded down to its nearest integer:

//Example

// console.log(Math.floor(4.9)); //down: 4

// console.log(Math.floor(4.7));

// console.log(Math.floor(4.4));

// console.log(Math.floor(4.2));

// console.log(Math.floor(-4.2)); //-5

// Math.trunc()

// Math.trunc(x) returns the integer part of x:

// console.log(Math.trunc(4.9));

// console.log(Math.trunc(4.7));

// console.log(Math.trunc(4.4));

// console.log(Math.trunc(4.2));

// console.log(Math.trunc(-4.2));

// console.log(Math.trunc(-4.9));

// JavaScript Random

// Math.random()

// Math.random() returns a random number between 0 (inclusive),  and 1 (exclusive):

// Example

// Returns a random number:

// console.log(Math.random());

//Example

// const x = Math.random();

// console.log(x);

// Example

// const x = Math.random()\*10;

// console.log(x);

// Math.random() always returns a number lower than 1.

// JavaScript Random Integers

// Math.random() used with Math.floor() can be used to return random integers.

// There is no such thing as JavaScript integers.

// We are talking about numbers with no decimals here.

// Example

// Returns a random integer from 0 to 9:

// console.log(Math.floor(Math.random() \* 10));

// const x = Math.floor(Math.random() \* 101);

// console.log(x);

// JavaScript Date Objects:

*let* date = new *Date*();

console.log(date);

// JavaScript Date Objects:

*let* date1 = new *Date*();

console.log(date1);

*let* date2 = new *Date*();

console.log(date2.getTime());

*let* date3 = new *Date*();

console.log(date3.getMonth());

*let* date4 = new *Date*();

console.log(date4.getFullYear());

*let* date5 = new *Date*();

console.log(date5.getHours());

*let* date6 = new *Date*();

console.log(date6.getMinutes());

*let* date7 = new *Date*(2020,11,1,5);

console.log(date7);