

✓ TIPOS DE DATOS

Sesión 1

```
1 # Enteros
2 num_entero = 10
3 print(num_entero)
```

↩ 10

```
1 # Flotantes
2 num_float = 5.2
3 print(num_float)
```

↩ 5.2

```
1 # Strings
2 cadena = "Hola a todos"
3 print(cadena)
```

↩ Hola a todos

```
1 # Booleanos
2 x = True
3 y = False
4 print(x)
5 print(y)
6 z = 3 > 2
7 print(z)
8 r = bool(0)
9 print(r)
10 r = bool(1)
11 print(r)
```

↩ True
False
True
False
True

✓ CONVERTIR UN TIPO DE DATOS A OTRO

```
1 # Convertir de entero a float
2 num_entero = 5
3 num_float = float(num_entero)
4 print(num_float)
```

↩ 5.0

```
1 # Convertir de flotante a entero
2 num_float = 5.3
3 num_entero = int(num_float)
4 print(num_entero)
```

↩ 5

✓ LECTURA DE VARIABLES

```
1 # Leer enteros
2 edad = int(input("Dame tu edad: "))
3 print(edad)
```

```
→ Dame tu edad: 56
56
```

```
1 # Leer un float
2 promedio = float(input("Dame tu promedio: "))
3 print(promedio)
```

```
→ Dame tu promedio: 96.5
96.5
```

```
1 # Leer strings
2 nombre = str(input("Dame tu nombre: "))
3 print(nombre)
4 nombre = input("Dame tu nombre: ")
5 print(nombre)
```

```
→ Dame tu nombre: Juan Pérez
Juan Pérez
Dame tu nombre: Juan Pérez
Juan Pérez
```

✓ FUNCIONES PREDEFINIDAS

```
1 import math
2 help(math)
```

```
→ Help on built-in module math:
```

```
NAME
    math
```

```
DESCRIPTION
    This module provides access to the mathematical functions
    defined by the C standard.
```

FUNCTIONS

```
acos(x, /)
    Return the arc cosine (measured in radians) of x.

    The result is between 0 and pi.
```

```
acosh(x, /)
    Return the inverse hyperbolic cosine of x.
```

```
asin(x, /)
    Return the arc sine (measured in radians) of x.

    The result is between -pi/2 and pi/2.
```

```
asinh(x, /)
    Return the inverse hyperbolic sine of x.
```

```
atan(x, /)
    Return the arc tangent (measured in radians) of x.

    The result is between -pi/2 and pi/2.
```

```
atan2(y, x, /)
    Return the arc tangent (measured in radians) of y/x.

    Unlike atan(y/x), the signs of both x and y are considered.
```

```
atanh(x, /)
    Return the inverse hyperbolic tangent of x.
```

```
ceil(x, /)
    Return the ceiling of x as an Integral.

    This is the smallest integer >= x.
```

```
comb(n, k, /)
```

Number of ways to choose k items from n items without repetition and without order.

Evaluates to $n! / (k! * (n - k)!)$ when $k \leq n$ and evaluates to zero when $k > n$.

Also called the binomial coefficient because it is equivalent to the coefficient of k-th term in polynomial expansion of the expression $(1 + x)^n$.

Raises `TypeError` if either of the arguments are not integers.
Raises `ValueError` if either of the arguments are negative.

```
1 raiz_cuadrada = math.sqrt(4.5)
2 print(raiz_cuadrada)
```

```
2.1213203435596424
```

```
1 raiz_cubica = math.pow(10, 1/3)
2 print(raiz_cubica)
```

```
2.154434690031884
```

```
1 print(math.pi)
```

```
3.141592653589793
```

✓ EJERCICIOS

Area de un círculo

```
1 radio = float(input("Dame el radio: "))
2 area = math.pi * radio * radio
3 print(area)
4 print("Area del círculo es: ", area)
5 print("Area del círculo es: %f" % area)
6 print("Area del círculo es: %.2f" % area)
```

```
Dame el radio: 10
314.1592653589793
Area del círculo es: 314.1592653589793
Area del círculo es: 314.159265
Area del círculo es: 314.16
```

Convertir grados fahrenheit a celsius

```
1 grados = float(input("Dame los grados fahrenheit: "))
2 celsius = 5 / 9 * (grados - 32)
3 print("%.2f grados fahrenheit equivalen a %.2f grados celsius" % (grados, celsius))
```

```
Dame los grados fahrenheit: 80
80.00 grados fahrenheit equivalen a 26.67 grados celsius
```

✓ OPERADORES

```
1 # División real
2 res = 5 / 2
3 print(res)
```

```
2.5
```


```
1 # División entera
2 res = 5 // 2
3 print(res)
```

 2

```
1 # Residuo
2 res = 5 % 2
3 print(res)
```

 1

```
1 # Potencia
2 res = 2 ** 5
3 print(res)
4
5 res2 = math.pow(2, 5)
6 print(res2)
```

 32
32.0