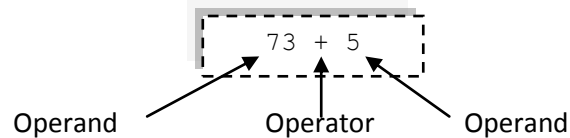


Computers are able to perform mathematical operations. Programming languages are able to do this with both numbers and numbers that are stored in variables or constants.



Mathematical **operations** have **operands** as inputs and an **operator** that performs an **operation** on the inputs to give an output. In this case, + is the operator, 73 and 5 are both operands. The result of the operation is 78.

The table below shows operators used in programming.

Operator	Name	Explanation	Examples
+	Addition	Adds two numbers together, or the numbers stored in variables. The result can be assigned to a variable	total ← 5 + 7 score ← score + 1
-	Subtraction	Subtracts the second operand from the first	discountedTotal ← 5 - 3 score ← score - 1
*	Multiplication	Used to multiply two numbers together	area ← 5 * 2 vat ← 23.47 * 0.2
/	Division	Used to divide one number by another	triangleArea ← 25 / 2 average ← total / 20
MOD	Modulus	Used to find the remainder (modulus) after division. Many languages will use the % symbol to mean MOD	25 MOD 5 [answer is 0] 25 MOD 8 [answer is 1] 25 MOD 7 [answer is 4] numberOfMonths ← 365 MOD 30 [answer is 5]
DIV	Integer division	Used to find the quotient (integer number before the decimal point) after division. Some languages use the // for this	25 DIV 5 [answer is 5] 25 DIV 8 [answer is 3] 25 DIV 7 [answer is 3] numberOfMonths ← 365 DIV 30 [answer is 12]

Examples:

```
playerAge ← 15
constant DAYS_IN_A_YEAR ← 365
daysAlive ← playerAge * 365
hoursAlive ← daysAlive * 24
tomorrowDaysAlive ← daysAlive + 1
```

```
score1 ← 92
score2 ← 84
score3 ← 63
total ← score1 + score2 + score3
average ← total / 3
```

Explanation:

Assign 15 to the variable playerAge
Assign 365 to the constant DAYS_OF_THE_YEAR
Multiply playerAge (15) by 365, then assign to daysAlive
Multiply daysAlive by 24 and assign to hoursAlive
Add 1 to daysAlive and then assign to tomorrowDaysAlive

Assign 3 numbers into the variables score1, score2 and score3

Add the 3 scores and assign to the variable total
Divide the value in the variable total by 3 then assign to the variable average