

Simple Mathematical Operators



Mathematical operators can be found in the Operators category:

Operators

They can be **nested** to create more complex calculations.

They can be used as **inputs to other blocks**.



20 + 8 - 4 / 6 × 2

8

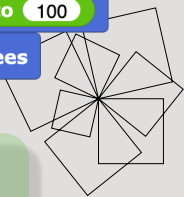
Nested operators are evaluated **from the inside to the outside**. Each block represents a bracket. In this case, it's

$((((20 + 8) - 4) / 6) \times 2) = 8$

repeat 7

square pick random 50 to 100

turn 360 / 7 degrees



The **pick random number** operator reports a random number between the numbers in the first and second input.

It can be used to bring **variation** to generative art projects.

pick random 1 to 10

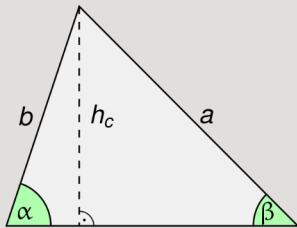
4

More Mathematical Operators



sqrt ▾ of 10

The **of** operator lets you select an operation in the drop-down menu and reports the result of that operation applied to the number in the second input slot.



This helps you e.g. to calculate the angles and side lengths of triangles using the sine rule.

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma}$$

$$\sin \beta = \frac{h_c}{a} \quad \sin \alpha = \frac{h_c}{b}$$

The **modulo** operator reports the **remainder** of the division of the first number by the second number.

This lets you e.g. do something for every second, third,... number

if **number mod 2 = 1**

do this

else

do that

This script executes “do this” for every even and “do that” for every odd number.

abs
neg
sign
ceiling
floor
sqrt
sin
cos
tan
asin
acos
atan
ln
log
lg
e^
10^
2^
id

5 mod 3

2