

Construit Script Cheat Sheet

<http://jseden.dcs.warwick.ac.uk/construit>

Quick Syntax

```
variable is formula ;
variable is formula + formula ;
variable is formula if condition else formula ;
variable is [formula, formula] ;
variable = formula ;

if (condition) {statements}
if (condition) {statements} else {statements}

when (condition) {statements}

for (variable in variable) {statements}
for (variable in formula..formula) {statements}
for (variable=number; condition; variable++)
{statements}

while (condition) {statements}

variable is formula with variable=formula ;
variable is formula with variable=formula,
variable=formula ;
variable is formula :: variable=formula ;
```

More: <https://goo.gl/j8xf9P>

Grammar: <https://goo.gl/synVAk>

Math Functions

<code>sin(number)</code>	<code>round(number)</code>
<code>cos(number)</code>	<code>ceil(number)</code>
<code>tan(number)</code>	<code>floor(number)</code>
<code>random(number)</code>	<code>sqrt(number)</code>
<code>randomInteger(number)</code>	<code>abs(number)</code>
<code>exp(number)</code>	<code>pow(number)</code>
<code>log(number)</code>	<code>sum(number)</code>
<code>max(number, number)</code>	<code>acos(number)</code>
<code>min(number, number)</code>	<code>asin(number)</code>

More:

String and List Functions

<code>concat</code>	<code>search(list)</code>
<code>lowercase</code>	<code>sort(list)</code>
<code>uppercase</code>	<code>unique(list)</code>
<code>substitute</code>	<code>tail(list)</code>
<code>substr</code>	<code>trim(string)</code>
<code>startsWith</code>	
<code>splitString</code>	

More:

Canvas Shapes

`Image(x, y, width, height, url)`

`Text(text, x, y, size, colour)`
`Rectangle(x, y, width, height, colour)`
`Circle(x, y, radius, colour)`
`Line(x1, y1, x2, y2, colour)`
`Button(name, label, x, y) ;`
`Polygon`
`Checkbox`
`Combobox`
`Slider`
`Arc`

Construit Markdown Comments

```
# Comment here
## Heading 1
### Heading 2
# Some italic text
# Some bold text
# Inline code `a is b + c`.
# A \[link\]\(http://jseden.dcs.warwick.ac.uk\)
# An image ![Figure 1](url)
# Embed a value ?(ACTIVE>variable)
#* Bullet item
#> Block quote
# --- horizontal rule
# Add [some colour]{red} to words
#! JS-Doc/Doxygen attached comment
```

More: <https://goo.gl/HsM5xt>

Useful Variables

<code>book_width</code>	<code>mouseX</code>
<code>book_height</code>	<code>mouseY</code>
<code>screenWidth</code>	<code>mouseDown</code>
<code>screenHeight</code>	<code>picture</code>

Searching

```
Script > child
Script >> allchildren
name.id(number)
name.type(when)
```

Example - Drawing a Circle

```
mycircle_x is book_width / 4;
mycircle_y = 100;
radius = 30;
mycircle is Circle(mycircle_x,
    mycircle_y, radius, "red");
picture is [mycircle];
```

Further Resources