Basic Typst Cheatsheet

Variables

```
$ A = pi r^2 $
```
$A = \pi r^2$

```
$ "area" = pi dot
"radius"^2 $
```
$\text{area} = \pi \cdot \text{radius}^2$

```
$ cal(A) :=
    { x in RR | x "is
natural" } $
```
$\mathcal{A} := \{x \in \mathbb{R} \mid x \text{ is natural}\}$

Symbols

```
$ x < y => x gt.eq.not y $
```
$x < y \Rightarrow x \gtrneqq y$

```
$ lambda $
```
λ

```
$ Lambda $
```
Λ

```
https://typst.app/docs/
reference/symbols/sym/
```
for all symbols

Line breaks

```
$ sum_(k=0)^n k
    &= 1 + ... + n \
    &= (n(n+1)) / 2 $
```
$$\sum_{k=0}^{n} k = 1 + ... + n$$
$$= \frac{n(n+1)}{2}$$

Function calls

```
$ frac(a^2,2) $
```
$\frac{a^2}{2}$

```
$ vec(1, 2, delim: "[") $
```
$\begin{bmatrix} 1 \\ 2 \end{bmatrix}$

```
$ mat(1, 2; 3, 4) $
```
$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$

```
$ lim_x =
    op("lim", limits:
#true)_x $
```
$\lim_x = \lim_x$

Alignment

```
$ (3x + y) / 7 &= 9 &&
"given" \
  3x + y &= 63 & "multiply
by 7" \
  3x &= 63 - y &&
"subtract y" \
  x &= 21 - y/3 & "divide
by 3" $
```
$$\frac{3x + y}{7} = 9 \qquad \text{given}$$
$$3x + y = 63 \qquad \text{multiply by 7}$$
$$3x = 63 - y \qquad \text{subtract y}$$
$$x = 21 - \frac{y}{3} \qquad \text{divide by 3}$$

Accent

```
$ grave(a) $
```
$\grave{a}$

```
$ arrow(a) $
```
$\vec{a}$

```
$ tilde(a) $
```
$\tilde{a}$

```
https://typst.app/docs/
reference/math/accent/
```
for all accents

Attach

```
$ sum_(i=0)^n a_i =
2^(1+i) $
```
$\sum_{i=0}^{n} a_i = 2^{1+i}$

Binomial

```
$ binom(n, k) $
```
$\binom{n}{k}$

```
$ binom(n, k_1, k_2,
k_3, ..., k_m) $
```
$\binom{n}{k_1, k_2, k_3, ..., k_m}$

cancel

```
$ (a dot b dot
cancel(x)) /
    cancel(x) $
```
$\frac{a \cdot b \cdot \cancel{x}}{\cancel{x}}$

cases

```
$ f(x, y) := cases(
  1 "if" (x dot y)/2 <= 0,
  2 "if" x "is even",
  3 "if" x in NN,
  4 "else",
) $
```

$$f(x, y) := \begin{cases} 1 \text{ if } \frac{x \cdot y}{2} \leq 0 \\ 2 \text{ if } x \text{ is even} \\ 3 \text{ if } x \in \mathbb{N} \\ 4 \text{ else} \end{cases}$$

equation

```
Let $a$, $b$, and $c$ be
the side
lengths of right-angled
triangle.
Then, we know that:
$ a^2 + b^2 = c^2 $
```

Let a, b, and c be the side lengths of right-angled triangle. Then, we know that:

$$a^2 + b^2 = c^2$$

```
$ sum_(k=1)^n k =
(n(n+1)) / 2 $
```

$$\sum_{k=1}^{n} k = \frac{n(n+1)}{2}$$

frac

```
$ 1/2 < (x+1)/2 $
```

$$\frac{1}{2} < \frac{x+1}{2}$$

```
$ ((x+1)) / 2 = frac(a, b)
$
```

$$\frac{(x+1)}{2} = \frac{a}{b}$$

Left/Right

```
$ [a, b/2] $
```

$$\left[a, \frac{b}{2}\right]$$

```
$ lr(]sum_(x=1)^n], size:
#50%) x $
```

$$\left]\sum_{x=1}^{n}\right] x$$

```
$ abs((x + y) / 2) $
```

$$\left|\frac{x+y}{2}\right|$$

mat

```
$ mat(
  1, 2, ..., 10;
  2, 2, ..., 10;
  dots.v, dots.v,
dots.down, dots.v;
  10, 10, ..., 10;
) $
```

$$\begin{pmatrix} 1 & 2 & \dots & 10 \\ 2 & 2 & \dots & 10 \\ \vdots & \vdots & \ddots & \vdots \\ 10 & 10 & \dots & 10 \end{pmatrix}$$

primes

```
$ a'''_b = a^'''_b $
```

$$a'''_b = a'''_b$$

Roots

```
$ sqrt(3 - 2 sqrt(2)) =
sqrt(2) - 1 $
```

$$\sqrt{3 - 2\sqrt{2}} = \sqrt{2} - 1$$

```
$ root(3, x) $
```

$$\sqrt[3]{x}$$

Sizes

```
$sum_i x_i/2 =
display(sum_i x_i/2)$
```

$$\sum_i \frac{x_i}{2} = \sum_i \frac{x_i}{2}$$

stretch

```
$ H stretch(=)^"define" U
+ p V $
```

$$H \overset{\text{define}}{=\!=} U + pV$$

```
f : X stretch(->>, size:
#150%)_"surjective" Y $
```

$$f : X \xrightarrow[\text{surjective}]{} \!\!\!\!\rightarrow Y$$

```
$ x stretch(harpoons.ltrb,
size: #3em) y
    stretch(\[, size:
#150%) z $
```

$$x \leftharpoondown\!\!\!\!\rightharpoonup y \left[z$$

op

```
$ tan x = (sin x)/(cos x)
$
```

$$\tan x = \frac{\sin x}{\cos x}$$

```
$ op("custom",
     limits: #true)_(n-
>oo) n $
```

$$\operatorname{custom}_{n\to\infty} n$$

Under/Over

```
$ underline(1 + 2 + ... +
5) $
```

$$\underline{1+2+...+5}$$

```
$ overline(1 + 2 + ... +
5) $
```

$$\overline{1+2+...+5}$$

```
$ underbrace(1 + 2 + ... +
5, "numbers") $
```

$$\underbrace{1+2+...+5}_{\text{numbers}}$$

Variants

```
$ sans(A B C) $
```

$$\mathsf{ABC}$$

```
$ frak(P) $
```

$$\mathfrak{P}$$

```
$ f: NN -> RR $
```

$$f : \mathbb{N} \to \mathbb{R}$$

vec

```
$ vec(a, b, c) dot vec(1,
2, 3)
    = a + 2b + 3c $
```

$$\begin{pmatrix} a \\ b \\ c \end{pmatrix} \cdot \begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix} = a + 2b + 3c$$

integral

```
$ integral_0^infinity e^(-
x) dif x $
```

$$\int_0^\infty e^{-x}\,\mathrm{d}x$$

```
$ integral.double_D
f(x_1),f(x_2),...,f(x_n)
dif x_1dif x_2...dif x_n $
```

$$\iint_D f(x_1), f(x_2), ..., f(x_n)\,\mathrm{d}x_1\,\mathrm{d}x_2 ...\,\mathrm{d}x_n$$

emoji

```
emoji.face
```

😀

```
emoji.zzz
```

💤

table

```
#table(
  columns: 2,
  [*Amount*],
[*Ingredient*],
  [360g], [Baking flour],
)
```

Amount	Ingredient
360g	Baking flour

image

```
#figure(

image("idTmyHzBar_logos.jpeg",
width: 10%),
  caption: [
    Typst Logo
  ],
)
```

Figure 1: Typst Logo

packages

```
https://typst.app/
universe/search/?kind=
packages
```

for all packages