

## 1 Basic Functions

$$g(a) = g(b)$$

$$f(a) = g(h(c))$$

$$h(c) = \sin a^2$$

$$\sin f(a)$$

## 2 Trigonometric functions

$$\sin a + \tan b$$

$$\sin a \cos b \neq \sin(a \cos b)$$

$$\sin 2\pi \neq \log 2x^2$$

$$\log \sin x$$

$$\sin \log x$$

$$\nabla \log x$$

## 3 Probability functions

$$p(x, y | \Theta)$$

$$p(y | x, \Theta)$$

$$f(a|b)$$

## 4 Missing arguments

$$fgh$$

$$fgha$$

## 5 Operator-like functions

$$FGH$$

$$FGHa$$

$$f'(a) = a^2$$

$$f^2(a) = g^b(2)$$

$$fgx$$

$$f(x)$$

## 6 Scripts

$$\ln a = \log_e a = \ln_+ b$$

## 7 Advanced argument patterns

$$f(a < b)$$

$$f(a : b)$$

$$f(a \leftrightarrow b)$$

$$f(\rightarrow, \leftarrow)$$