New Commands in LaTeX

Mehmet Hakan Satman

October 26, 2025

Contents

1 A Simple New Command

```
\newcommand{
    \mycommand}[2]{
        This is the first argument: #1.
        This is the second argument: #2.
    }
```

Usage example:

```
\mycommand{Hello}{World}
```

Result:

This is the first argument: Hello. This is the second argument: World.

2 Product of Two Numbers

```
\newcommand{\myprod}[2]{#1 \times #2}
```

Usage example:

```
$$
\myprod{2}{3}
$$
```

Result:

$$2 \times 3$$

3 Combinations

```
\newcommand{\combination}[2]{\binom{#1}{#2}}
```

Usage example:

```
$$
\combination{5}{2}
$$
```

Result:

$$\binom{5}{2}$$

4 Exponential Distribution Function

```
\newcommand{\exponential}[1]{f(x) = \frac{1}{#1} e^{- \frac{x}{#1}}}
```

Usage example:

```
$$
\exponential{100}
$$
```

Result:

$$f(x) = \frac{1}{100}e^{-\frac{x}{100}}$$

Example use 2:

```
$$
\exponential{\theta}
$$
```

Result:

$$f(x) = \frac{1}{\theta}e^{-\frac{x}{\theta}}$$

5 Quadratic Function

```
\newcommand{\quadratic}[3]{#1 x^2 + #2 x + #3}
```

Usage example:

```
$$
\quadratic{2}{5}{10}
$$
```

Result:

$$2x^2 + 5x + 10$$

6 Delta of a Quadratic Equation

```
\newcommand{\quadraticdelta}[3]{#2^2 - 4 \times #1 \times #3}
```

Usage example:

```
$$
\quadraticdelta{1}{2}{3}
$$
```

Result:

$$2^2 - 4 \times 1 \times 3$$

7 If, Then, Else Command

This examples uses `xifthen` package. Load the package in the preamble with
`\usepackage{xifthen}`.

```
\newcommand{\mymin}[2]{
    \ifthenelse{#1 < #2}{#1}{#2}
}
```

Usage example:

```
$$
\mymin{3}{5}
$$
```

Result:

$$3$$

Usage example 2:

```
$$
\mymin{10}{7}
$$
```

Result:

$$7$$