

# mk\_graph Manual

---

Edition : 2009.02.12

# 1 Function Manual

## 1.1 Outline

## 1.2 Notation

## 1.3 Functions

### 1.3.1 mtg.plot3d

`mtg.plot3d(formula)`

:: Draw a graph of *formula*

`mtg.plot3d(formula | options)`

:: Draw a graph of *formula*. Optional arguments are described below.

*return* List

*formula* Expression or quote data. It should be a function in *x*, *y*.

*optinal arguments*

*domain* List. `[[xmin,xmax],[ymin,ymax]]`

*mesh* Natural number. Division number to mesh the region.

*fit* When it is 1,  $(\max + \min)/2$  is moved to the origin in *z*.

- Details have not been written. See examples.

```
[1210] import("mt_graph.rr");
```

```
[1211] mtg.test2();
```

```
[1210] import("mt_graph.rr");
```

```
[1211] mtg.plot3d(x^2-y^2);
```

```
[1210] import("mt_graph.rr");
```

```
[1211] mtg.plot3d(x^2-y^2 | domain=[[-1,1],[1,1]]);
```

```
[1210] import("mt_graph.rr");
```

```
[1211] def myfunc(X,Y) { if (X*Y < 0) return 0; else 1;}
```

```
[1212] mtg.plot3d(quote(myfunc(x,y)*x*y));
```

### 1.3.2 mtp.parametric\_plot3d

`mtp.parametric_plot3d(formula)`

:: Draw a graph of *formula*

`mtp.parametric_plot3d(formula | options)`

:: Draw a graph of *formula*. Optinal arguments are described below.

*return* List

*formula* Expression or quote data. It should be a function in *s*, *t*.

*optinal arguments*

*domain* List. `[[xmin,xmax],[ymin,ymax]]`

`mesh`        Natural number. Division number to mesh the region.

`fitting`    If it is set to 0, then automatic fitting to the z-direction is not done.

- Details have not been written. See examples.

```
[1210] import("mt_graph.rr");
[1211] mtp.test5();    /* Klein bottle (8 figure) */
[1210] import("mt_graph.rr");
[1211] mtp.parametric_plot3d([s,t,s^2-t^2]);
[1210] import("mt_graph.rr");
[1211] def myfunc(X,Y) { if (X*Y < 0) return 0; else 1;}
[1212] mtp.parametric_plot3d([s,t,quote(myfunc(s,t)*s*t) | fitting=0);
```

# Index

(Index is nonexistent)

(Index is nonexistent)

## Short Contents

1	Function Manual . . . . .	1
	Index . . . . .	3

# Table of Contents

<b>1</b>	<b>Function Manual .....</b>	<b>1</b>
1.1	Outline.....	1
1.2	Notation .....	1
1.3	Functions.....	1
1.3.1	mtg.plot3d .....	1
1.3.2	mtp.parametric_plot3d .....	1
	<b>Index.....</b>	<b>3</b>

