

# Mathematica OX server ♪

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OpenXM.org

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# 1 Mathematica 醇

```

Mathematica ox 泣若 ox_math や鴻帥 若拷 違茹 h . 違 <や
'mathematica.rr' 臂 <や load("mathematica.rr")$ 若 箆睡 .
'mathematica.rr' '$(OpenXM_HOME)/lib/asir-contrib' .
羈 : ox_reset .

```

```

[258] load("mathematica.rr")$
m Version 19991113. mathematica.start, mathematica.tree_to_string, mathematica.n_Ei
[259] mathematica.start();
ox_math has started.
ox_math: Portions copyright 2000 Wolfram Research, Inc.
See OpenXM/Copyright/Copyright.mathlink for details.
0
[260] mathematica.n_Eigenvalues([[1,2],[4,5]]);
[-0.464102,6.4641]

```

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Author of ox\_math: Katsuyoshi Ohara.

## 1.1 醇遺荀

### 1.1.1 mathematica.start

```

mathematica.start()
:: Localhost ox_math 莎桁.
return 贗
• Localhost ox_math 莎桁. 莎桁 ox_math ㊀ 激祉.
• Xm_noX =1 , ox_math debug window .
• 荔㊀ 激 M_proc 主.
P = mathematica.start()
ox_launch

```

### 1.1.2 mathematica.tree\_to\_string

```

mathematica.tree_to_string(t)
:: ox_math 祉 Mathematica 若 t asir 綵 .
return 統
t 鴻
• t ox_math 祉 Mathematica 若.
• ox_math 祉 Mathematica 若 t asir 綵 .

```

- $t$  鴻 asir 茹 c 綵 , 腎 障 賢腎 羈 統 .  $t$  脰 統 若 若 , 統素若  
,  $m$  若 若 や, 医弱阪就綵 統 .

```

[267] mathematica.start();
0
[268] ox_execute_string(0,"Expand[(x-1)^2]");
0
[269] A=ox_pop_cmo(0);
[Plus,1,[Times,-2,x],[Power,x,2]]
[270] mathematica.tree_to_string(A);
(1)+((-2)*(x))+((x)^(2))
[271] eval_str(@);
x^2-2*x+1
[259] mathematica.tree_to_string(["List",1,2]);
[1 , 2]
[260] mathematica.tree_to_string(["Plus",2,3]);
(2)+(3)
[261] mathematica.tree_to_string(["Complex",2.3,4.55]);
mathematica.complex(2.3 , 4.55)
[362] mathematica.tree_to_string(["Plus",["Complex",1.2,3.5],1/2]);
(mathematica.complex(1.2 , 3.5))+(1/2)
[380] eval_str(@);
(1.7+3.5*i)

ox_pop_cmo, eval_str, mathematica.rtomstr

```

### 1.1.3 mathematica.rtomstr

```

mathematica.rtomstr(t)
::  $t$  鴻 Mathematica 茹 e 純 統 .

return 統

 $t$  吾
•  $t$  鴻 Mathematica 茹 c 綵 統 . , asir 鴻 [, ] 蚊, Mathematica {, }
蚊. 違 .
[259] mathematica.rtomstr([1,2,3]);
{1,2,3}
[260] mathematica.rtomstr([[1,x,x^2],[1,y,y^2]]);
{{1,x,x^2},{1,y,y^2}}
箏や. 罨 < mathematica.inverse(M) ox_math M 茵荐膊 違 .
mathematica.inverse(M) r_tostr(M) asir Mathematica 綵
ox_execute_string Mathematica 茵荐膊 .
def inverse(M) {
P = 0;
A = mathematica.rtomstr(M);
ox_execute_string(P,"Inverse["+A+"]");
B = ox_pop_cmo(B);
C = mathematica.tree_to_string(B);

```

```
        return(eval_str(C));
    }

[269] M=[[1,x,x^2],[1,y,y^2],[1,z,z^2]];
[[1,x,x^2],[1,y,y^2],[1,z,z^2]]
[270] A=mathematica.inverse(M)$
[271] red(A[0][0]);
(z*y)/(x^2+(-y-z)*x+z*y)

    ox_execute_string, ToExpression(Mathematica), mathematica.tree_to_
    string
```

# Index

(Index is nonexistent)

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## Short Contents

1	Mathematica 醇	1
Index		4

# Table of Contents

<b>1</b>	<b>Mathematica 醇</b>	<b>1</b>
1.1	醇	1
1.1.1	mathematica.start	1
1.1.2	mathematica.tree_to_string	1
1.1.3	mathematica.rtomstr	2
<b>Index</b>		<b>4</b>