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Author
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<https://www.enago.com/academy/tw/using-mathematica/>



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Mathematica????????Abs[x]??x????Random[]????[0,
1]????Factor[expr]??expr????Plot[f[x], {x, xmin,
xmax}]????f????????Solve[x²-2x+1==0, x]
????x????D[f, x1, x2, x3]
????f??x1?x2?x3????Integrate[f, {x, a,
b}]????f??x?x=a?x=b????DSolve[{x''[t]-
3x'[t]+8y'[t]+4y[t]==0, x'[t]-2y'[t]+7x[t]==3 Exp[t]}, {x[t], y[t]},

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Mathematica?MATLAB??

1. MATLAB????????????????????????????????Mathematica?????????
2.

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[illegible]

3.

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??Mathematica????????????????????[????????????](#)
????????????Mathematica????????????????????20??????????

1. ?????????Notebook????????In[]????????Out[]?????“Shift+Enter”??????
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3. ????????File-

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4. Mathematica

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x0]?

5. ?????????????????????????????????

6. ?????

Pi ?????

E??????

Degree????????????Pi/180?

I????????-1????

7. ?????

x=a????x???a?

x=y=b????x?y????b?

x=.?Clear[x]????x???

Remove[f]???f?????

8. ?????

?xy????????xy?

?x y????x?y?

3x??3?x?

x3????x3?

9. ?????????????[]????????????“()”???

10. ?????????????{ }???

11. ?????????Mathematica????????x/(1+7x)+y/(x-2)????????

12. ?????

Expand[expr]???expr???

Factor[expr]???expr?????

Simplify[expr]???expr???????

FullSimplify[expr]?Mathematica????????expr???????

13. ?????

Sin[x], Cos[x], Tan[x], Cot[x], Sec[x], Csc[x]????????

Sinh[x], Cosh[x], Tanh[x]???????

ArcSin[x], ArcCos[x], ArcTan[x]?????????

Sqrt[x]?????

Exp[x]?????

Log[x]???????Log[a, x]???a??????

Abs[x]??????

Round[x]?????x????

Floor[x]???????x??????

Ceiling[x]???????x??????

Max[a, b, c, ...]?Min[a, b, c, ...]????a?b?c?...??????????

14. ??????

$a=b$?????

$a \neq b$?????

$a > b$?????

$a \geq b$???????

$a < b$?????

$a \leq b$???????

15. ???????

a^b ??????

$a+b+c$?????

$2+6i$???????

Conjugate[a+bi]???????

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16. ????????

Sum[f, {i, imin, imax}]?????

Sum[f, {i, imin, imax, di}]??????????i?di???

Product[f, {i, imin, imax}]?????

Product[f, {i, imin, imax, di}]??????????i?di???

17. ??????

D[f, x]?????f???x?????

D[f, x1, x2, ...]?????f???x1?x2?...?????

D[f, {x, n}]?????f???x??n?????

D[f, x, NonConstants->{y, z, ...}]?????f???x???????y?z?...?x?????

18. ??????

Integrate[f, x]?????f???x???????

Integrate[f, {x, xmin, xmax}]?????f???x???????

Integrate[f, {x, xmin, xmax}, {y, ymin, ymax}]?????f???x?y???????

19. ????????

Solve[lhs==rhs, x]???????lhs==rhs?x?????

Nsolve[lhs==rhs, x]???????lhs==rhs?????

Solve[{lhs1==rhs1, lhs2==rhs2, ...}, {x, y, ...}]???????x?y?????

NSolve[{lhs1==rhs1, lhs2==rhs2, ...}, {x, y, ...}]???????????????

FindRoot[lhs==rhs, {x, x0}]???????x0???lhs==rhs???

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