> **12+4-5;**



> **2^10;**



> **sin(0.1);**



> **(a+b)(a-b);**



> **y:=x->3\*(x^3)+2\*(x^2)-5;**

> **diff(y(x),x);**





> **y:=x->sqrt(1+(x^4));**



> **diff(y(x),x);**



> **y:=x->exp(x)\*sin(x)\*cos(x);**



> **diff(y(x),x);**



> **int(3\*(x^3)+2\*(x^2)-5,x=0..1);**



> **int(1/(x^2),x=0..infinity);**



> **int(exp(-(x^2)),x=-infinity..infinity);**



> **limit(sin(x)/x,x=0);**



> **limit((x^3+3\*(x^2)-5)/(2\*(x^3)-7\*x),x=infinity);**

> **limit((cos(x)+1)/(x-Pi),x=Pi);**





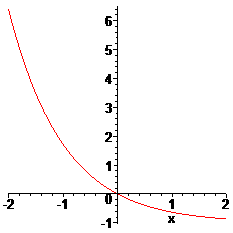
> **f:=x->exp(-x)-1;**

> **with(plots):**



Warning, the name changecoords has been redefined

> **plot(f(x),x=-2..2);**



> **f:=x->((200\*exp(r\*x))/(2\*(exp(r\*x)-1)+100));**



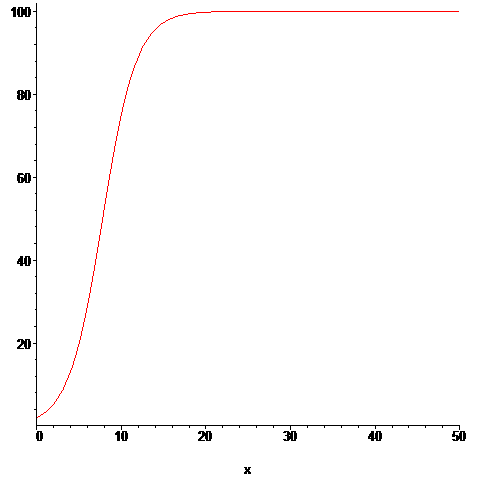
> **r:=0.5;**



> **\with(plots);**



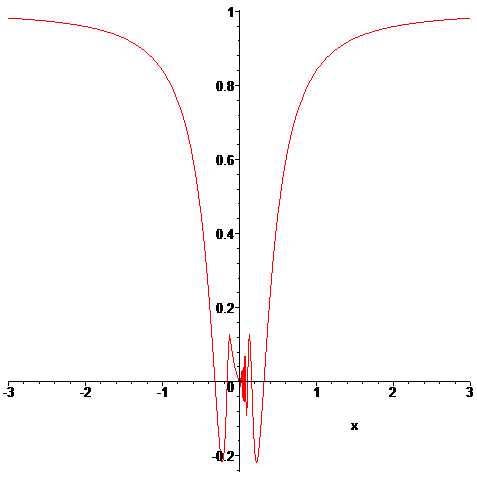
> **plot(f(x),x=0..50);**



> **f:=x->x\*sin(1/x);**



> **plot(f(x),x=-3..3);**



>

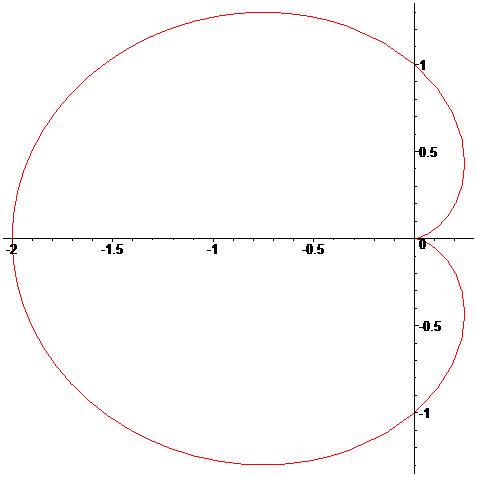
> **x:=t->(1-cos(t))\*cos(t);**



> **y:=t->(1-cos(t))\*sin(t);**



> **plot([x(t),y(t),t=0..2\*Pi]);**



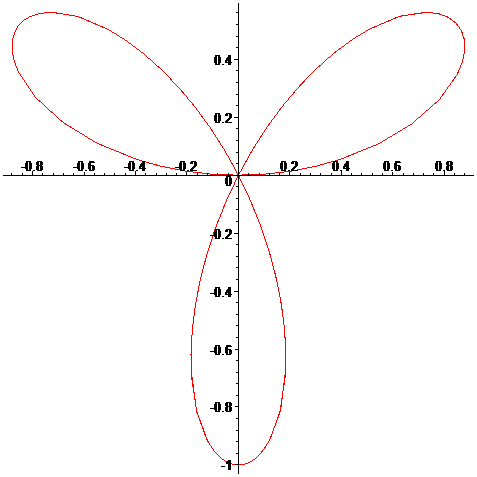
> **x:=t->sin(3\*t)\*cos(t);**



> **y:=t->sin(3\*t)\*sin(t);**



> **plot([x(t),y(t),t=0..2\*Pi]);**



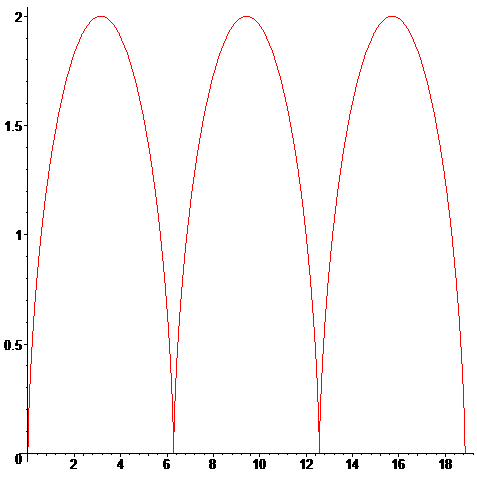
> **x:=t->t-sin(t);**



> **y:=t->1-cos(t);**



> **plot([x(t),y(t),t=0..6\*Pi]);**



> **f:=(t,s)->1-(s\*cos(4\*t)\*cos(t))/sqrt(1-(s^2)\*(cos(4\*t))^2\*(sin(t))^2);**



> **x:=(t,s)->f(t-Pi/2,s);**



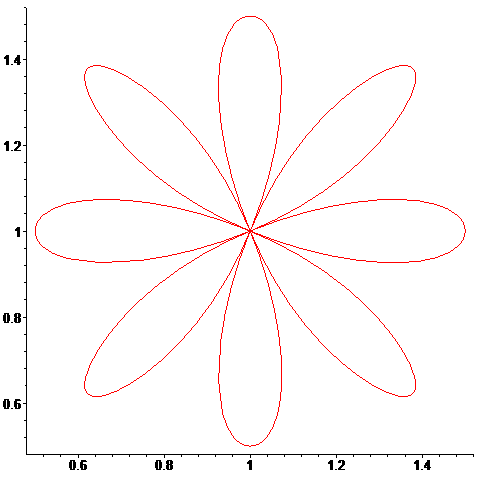
> **y:=(t,s)->f(t,s);**



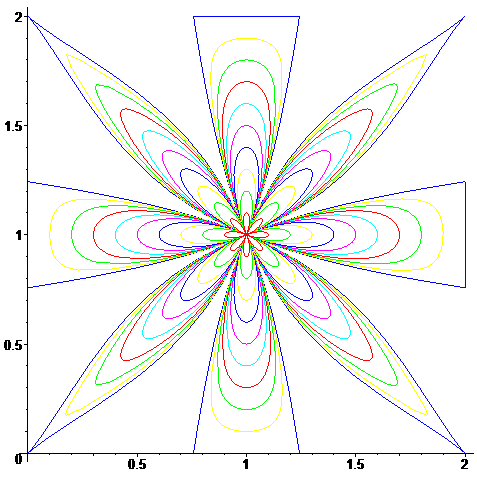
> **s:=0.5;**



> **plot([x(t,s),y(t,s),t=0..2\*Pi]);**

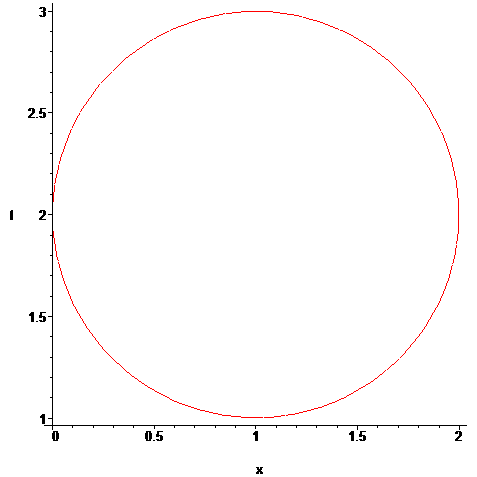


> **plot([[x(t,i/10),y(t,i/10),t=0..2\*Pi]$i=1..10]);**

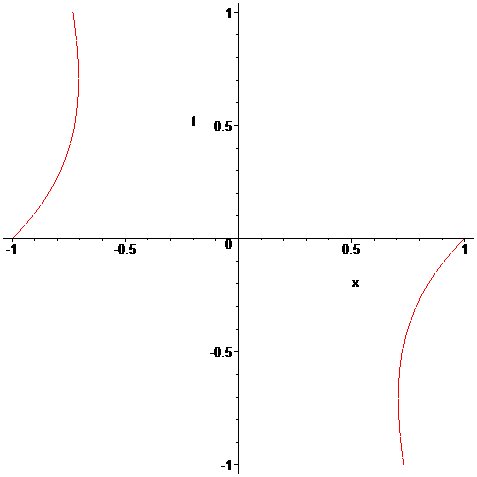


> **with(plots):**

> **implicitplot(x^2+y^2-2\*x-4\*y+4=0,x=0..3,y=0..3);**



> **implicitplot(x^2-2\*x\*y-y^2=1,x=-1..1,y=-1..1);**

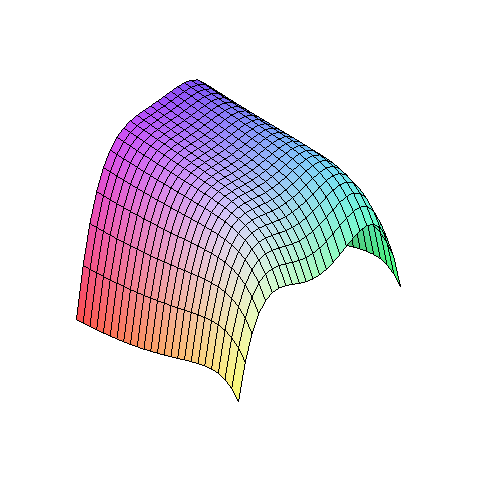


>

> **z:=(x,y)->4\*(x^2)\*exp(y)-2\*(x^4)-exp(4\*y);**



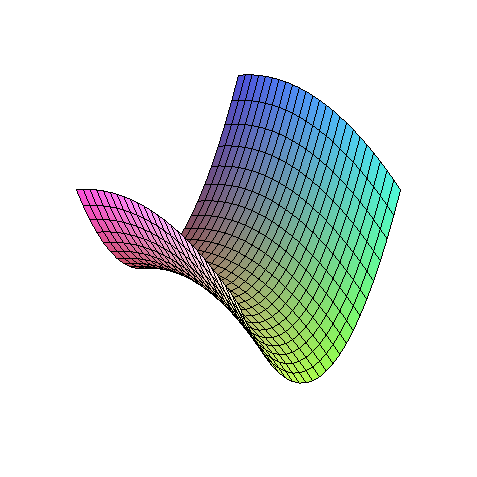
> **plot3d(z(x,y),x=-3..3,y=-1..1);**



> **z:=(x,y)->4\*(x^2)-y^2;**



> **plot3d(z(x,y),x=-100..100,y=-100..100);**



> **with(linalg);**



> **A:=matrix([[1,2,-1],[0,1,0],[3,-1,2]]);**



> **B:=matrix([[1,2,3],[1,1,2],[2,1,1]]);**



> **C:=matrix([[2,1,1],[0,1,-1],[4,2,2]]);**



> **evalm(2\*A-B);**



> **evalm(B^(-1));**



> **eigenvals(C);**



> **eigenvects(C);**

