Enter the function f(x,y): 2\*(x^2-y^2)-x^4+y^4

ans =

'The point (0.000000,0.000000) is a saddle point'

ans =

'The maximum value of the function is f(-1.000000,0.000000)=1.000000'

ans =

'The maximum value of the function is f(1.000000,0.000000)=1.000000'

ans =

'The minimum value of the function is f(0.000000,-1.000000)=-1.000000'

ans =

'The minimum value of the function is f(0.000000,1.000000)=-1.000000'

ans =

'The point (-1.000000,-1.000000) is a saddle point'

ans =

'The point (1.000000,-1.000000) is a saddle point'

ans =

'The point (-1.000000,1.000000) is a saddle point'

ans =

'The point (1.000000,1.000000) is a saddle point'

>>

Enter the function f(x,y): (x+5)^2 + y^2 + (x-1)^2 + (y-7)^2 + (x-9)^2 + y^2 + x^2 + (y+8)^2

ans =

'The minimum value of the function is f(1.250000,-0.250000)=213.500000'

>>

Enter the function f(x,y): x^4 + y^4 - x^2 - y^2 + 1

ans =

'The point (-0.707107,0.000000) is a saddle point'

ans =

'The point (0.707107,0.000000) is a saddle point'

ans =

'The point (0.000000,-0.707107) is a saddle point'

ans =

'The point (0.000000,0.707107) is a saddle point'

ans =

'The maximum value of the function is f(0.000000,0.000000)=1.000000'

ans =

'The minimum value of the function is f(-0.707107,-0.707107)=0.500000'

ans =

'The minimum value of the function is f(0.707107,-0.707107)=0.500000'

ans =

'The minimum value of the function is f(-0.707107,0.707107)=0.500000'

ans =

'The minimum value of the function is f(0.707107,0.707107)=0.500000'

>>

Enter the function f(x,y): x^3 + 3\*x\*y^2 - 15\*x^2 - 15\*y^2 + 72\*x

ans =

'The maximum value of the function is f(4.000000,0.000000)=112.000000'

ans =

'The minimum value of the function is f(6.000000,0.000000)=108.000000'

ans =

'The point (5.000000,-1.000000) is a saddle point'

ans =

'The point (5.000000,1.000000) is a saddle point'

>>