

```
In [4]: x0=2
        y0=3
        eta=0.01
        eps=0.000001
        del_x=1
        del_y=1
        max_iter=100
        iters=0
```

```
In [5]: import math
        def diff(x,y):
            x_der=6*(x)
            y_der=-5*(math.exp(-y))
            return x_der,y_der
```

```
In [6]: while max(abs(del_x),abs(del_y))>eps and iters<max_iter:
        p_x=x0
        p_y=y0
        del_x,del_y=diff(p_x,p_y)
        del_x=-eta*del_x
        del_y=-eta*del_y
        x0=x0+del_x
        y0=y0+del_y
        iters=iters+1

        print("Local minimum occurs at",x0,y0)

Local minimum occurs at 0.004109749541047198 3.222513357120518
```

```
In [ ]:
```