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# Program for R-K 4th order method

def f(x,y):

    z=x*x+y*y

    return z

# Main Program

# Input Section

xn=float(input('Enter the value of xn:'))

h=float(input('Enter the value of h:'))

n=int(xn/h) ;

x0=0 ;

y0=0 ;

for k in range(0,n):

    k1=f(x0,y0);

    k2=f(x0+h/2,y0+k1/2);

    k3=f(x0+h/2,y0+k2/2);

    k4=f(x0+h,y0+k3);

    k=(k1+2*k2+2*k3+k4)*(h/6);

    y0=y0+k;

    x0=x0+h;

    print('display x and y %0.4f'%x0,'%0.4f'%y0)

```

Results:

Enter the value of xn:0.4

Enter the value of h:0.2

display x and y 0.2000 0.0027

display x and y 0.4000 0.0218