

```
%Name - Shriman Zunjarrao Patil
% Roll No. - TYMEB209
% Batch - B4

clc;
f = inline('(x^2)/(y^2 + 1)');
x1 = input('Enter the value of X1 = ');
y1 = input('Enter the value of Y1 = ');
xn = input('Enter the value of Xn = ');
Acc = input('Enter the value of Accuracy = ');

while x1 < xn
    yp = y1 + h*f(x1,y1);
    x2 = x1 + h;
    yc = y1 + (h/2)*(f(x1,y1)+f(x2,yp));

    while abs(yc-yp)>Acc
        yp = yc;
        yc = y1 + (h/2)*(f(x1,y1) + f(x2,yp));
    end
    x1 = x1+h;
    y1 = yc
end;
fprintf('%f , %f\n ',x1,y1)

%OUTPUT
Enter the value of X1 = 0
Enter the value of Y1 = 0
Enter the value of Xn = 1
Enter the value of Accuracy = 0.001

y1 = 0.0078
y1 = 0.0468
y1 = 0.1468
y1 = 0.3285

1.000000 , 0.328472
```