```cpp
#include <iostream>
#include <vector>

using namespace std;

float yd(float t, float y)
{
    return y- t*t + 1;
}

void rungeKutta(float N, float h, float y0)
{
    const int n = 10; // n = N

    float k[4], t[100], y[100];
    y[0] = y0;
    //cout<<"y0 = "<<y[0]<<endl;
    for(int i=0; i<N; i++)
    {
        t[i] = i*h;

        k[0] = h*yd(t[i],y[i]);
        k[1] = h*yd(t[i] + h*.5, y[i] + .5*k[0]);
        k[2] = h*yd(t[i] + h*.5, y[i] + .5*k[1]);
        k[3] = h*yd(t[i] + h, y[i] + k[2]);

        //cout<<k[0]<<k[1]<<k[2]<<k[3]<<endl;
        y[i+1] = y[i] + (k[0] + 2*k[1] + 2*k[2] + k[3])/6;
        cout<<"y"<<i<<" = "<<y[i]<<endl;
    }
}

int main()
{
    float N=10, h=.2, y0= .5;
    rungeKutta(N,h,y0);
}
```

```
Kutta }
y0 = 0.5
y1 = 0.829293
y2 = 1.21408
y3 = 1.64892
y4 = 2.1272
y5 = 2.64082
y6 = 3.17989
y7 = 3.73234
y8 = 4.28341
y9 = 4.81509
PS C:\Users\luisa\OneDrive - up.edu.mx\Docum
```