```
> restart;
> f:=(x,y)->0.2*x*y;
```
$$f := (x, y) \rightarrow 0.2\, x\, y$$

```
> x[0]:=1;
  y[0]:=1;
```
$$x_0 := 1$$
$$y_0 := 1$$

```
> n:=64;
  h:=5.0/n;
```
$$n := 64$$
$$h := 0.07812500000$$

```
> for i from 0 to n-1 do
      x[i+1]:=x[0]+h*(i+1);
      yp:=y[i]+h*f(x[i],y[i]);
      y[i+1]:=0.5*(y[i]+yp+h*f(x[i+1],yp));
  od:
> plot([seq([x[i],y[i]],i=0..n)]);
```



```
> x[n]; y[n];
```
$$6.000000000$$
$$33.03269719$$

```
> correctans:=exp(-0.1)*exp(6^2*0.1);
```
$$correctans := 33.11545195$$

```
> AbsError:=abs(correctans-y[n]);
```
$$AbsError := 0.08275476$$

```
> RelError:=AbsError/correctans;
```
$$RelError := 0.002498977218$$

```
>
```