```
> # Section 2.6 Problem 3 part b
> restart;
> f:=(x,y)->y;
```

$$f := (x, y) \rightarrow y$$

```
> x[0]:=0;
  y[0]:=1;
```

$$x_0 := 0$$

$$y_0 := 1$$

```
> n:=20;
  h:=1.0/n;
```

$$n := 20$$

$$h := 0.05000000000$$

```
> for i from 0 to n-1 do
     x[i+1]:=x[0]+h*(i+1);
     y[i+1]:=y[i]+h*f(x[i],y[i]);
  od:
> yc:=x->exp(x);
```

$$yc := \exp$$

```
> matrix([seq([x[i],y[i],yc(x[i]),
     abs(y[i]-yc(x[i])),
     100*abs((y[i]-yc(x[i]))/yc(x[i]))],i=0..n)]);
```

0	1	1	0	0
0.05000000000	1.050000000	1.051271096	0.001271096	0.1209103917
0.1000000000	1.102500000	1.105170918	0.002670918	0.2416746547
0.1500000000	1.157625000	1.161834243	0.004209243	0.3622929024
0.2000000000	1.215506250	1.221402758	0.005896508	0.4827652436
0.2500000000	1.276281562	1.284025417	0.007743855	0.6030920337
0.3000000000	1.340095640	1.349858808	0.009763168	0.7232732744
0.3500000000	1.407100422	1.419067549	0.011967127	0.8433091863
0.4000000000	1.477455443	1.491824698	0.014369255	0.9631999671
0.4500000000	1.551328215	1.568312185	0.016983970	1.082945740
0.5000000000	1.628894626	1.648721271	0.019826645	1.202546807
0.5500000000	1.710339357	1.733253018	0.022913661	1.322003237
0.6000000000	1.795856325	1.822118800	0.026262475	1.441315188
0.6500000000	1.885649141	1.915540829	0.029891688	1.560482948
0.7000000000	1.979931598	2.013752707	0.033821109	1.679506569
0.7500000000	2.078928178	2.117000017	0.038071839	1.798386334
0.8000000000	2.182874587	2.225540928	0.042666341	1.917122281
0.8500000000	2.292018316	2.339646852	0.047628536	2.035714747
0.9000000000	2.406619232	2.459603111	0.052983879	2.154163766
0.9500000000	2.526950194	2.585709659	0.058759465	2.272469563
1.000000000	2.653297704	2.718281828	0.064984124	2.390632323

>