

```
In [8]: runfile('C:/Users/tzave/ComputationalPhysics/Assignment4/ex1.py', wdir='C:/Users/tzave/ComputationalPhysics/Assignment4')
```

```
Reloaded modules: diffEquation
```

```
Analytic
```

```
Integral: 130.5
```

```
Trapezoid
```

```
{'integral': 130.50117587954807, 'iterations': 10, 'evaluations': 1024}
```

```
Deviation: 0.00117587954807
```

```
Simpson 1/3
```

```
{'integral': 130.50023174285889, 'iterations': 6, 'evaluations': 64}
```

```
Deviation: 0.000231742858887
```

```
In [9]: runfile('C:/Users/tzave/ComputationalPhysics/Assignment4/ex2.py', wdir='C:/Users/tzave/ComputationalPhysics/Assignment4')
```

```
Reloaded modules: integration
```

```
Euler
```

```
h=0.005, iterations=283
```

```
h=0.010, iterations=142
```

```
h=0.050, iterations=29
```

```
h=0.100, iterations=15
```

```
Runge-Kutta 4th
```

```
h=0.005, iterations=282
```

```
h=0.010, iterations=141
```

```
h=0.050, iterations=28
```

```
h=0.100, iterations=14
```

```
In [10]: runfile('C:/Users/tzave/ComputationalPhysics/Assignment4/ex3.py', wdir='C:/Users/tzave/ComputationalPhysics/Assignment4')
```

```
Reloaded modules: diffEquation
```

```
Max Range @27.61 deg: 3.0647
```

```
Max Range @25.78 deg: 3.0631
```

```
In [11]:
```