Part 2 Solutions

1.

```
m = float(raw_input('Please enter the mass: '))
v = float(raw_input('Please enter the velocity: '))
E = 0.5*m*v**2
print E
```

2.

```
name = (raw_input('Please enter you name'))
print 'Your name is', name, ', Congratulations!!!'
```

3.

```
from numpy import pi
print pi**10
```

4.

```
from numpy import exp
a_0 = 100
print "Day 1: ", a_0*exp(1)
print "Day 2: ", a_0*exp(2)
print "Day 3: ", a_0*exp(3)
print "Day 4: ", a_0*exp(4)
print "Day 5: ", a_0*exp(5)
```

5.

```
from numpy import e
print e**10
```

6.

```
from numpy import log
number = float(raw_input("Please enter a positive number: "))
print log(number)
```

7.
```
from numpy import sin, pi
a = float(raw_input("Please enter length of a: "))
b = float(raw_input("Please enter length of b: "))
theta = float(raw_input("Please enter angle between a and b
in degrees: "))
theta_radians = theta * pi / 180
print "The area is", a * b * sin(theta_radians)
```

8.
```
def add(a, b):
    return a + b
```

9.
```
def tenth_power(a):
    return a ** 10
```