Individual Task 2

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Exercise 1

```
In [41]: def get_days(a,b,c):
    ...:     print("days:", round((a*60*60 + b*60 + c)/86400, 4))
    ...:
    ...:
    ...: def convert_to_days():
    ...:     hours=eval(input("Enter hours:"))
    ...:     minutes=eval(input("Enter minutes:"))
    ...:     seconds=eval(input("Enter seconds:"))
    ...:     get_days(hours,minutes,seconds)

In [42]: convert_to_days()

Enter hours:97

Enter minutes:54

Enter seconds:45
days: 4.0797
```

Exercise 2

```
In [60]: def calc_weight_on_planet(earthw,plgrav=None):
    ...:     if plgrav is None:
    ...:         print((earthw/9.8)*23.1)
    ...:     else:
    ...:         equivw = (earthw/9.8)*plgrav
    ...:         return equivw

In [61]: calc_weight_on_planet(120)
282.85714285714283

In [62]: calc_weight_on_planet(120,9.8)
Out[62]: 120.0
```

Exercise 3

```
In [71]: def num_atoms(grams,atomw=None):
    ...:     avog = (6.02*10**23)
    ...:     if atomw is None:
    ...:         print((grams / 196.97)*avog)
    ...:     else:
    ...:         print((grams / atomw)*avog)

In [72]: num_atoms(10)
3.0563029903030914e+22

In [73]: num_atoms(10,12.001)
5.016248645946171e+23
```

Exercise 4

```
In [86]: def calc_new_height():
    ...:     oldwidth = eval(input("enter old witdth:"))
    ...:     oldheight = eval(input("enter old height:"))
    ...:     deswidth = eval(input("enter desired width:"))
    ...:     ratio = oldwidth / oldheight
    ...:     print("the new height should be:",(deswidth/ratio))

In [87]: calc_new_height()

enter old witdth:800

enter old height:560

enter desired width:370
the new height should be: 259.0
```

Exercise 5