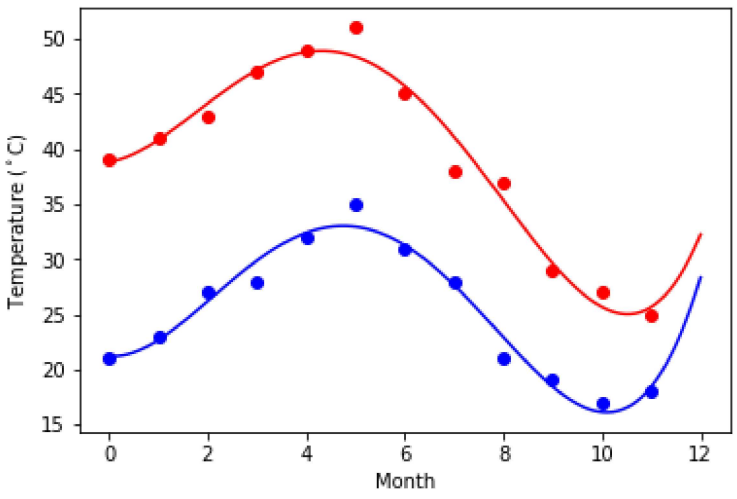
Scipy:

We have the min and max temperatures in a city In India for each months o
f the year.
We would like to find a function to describe this and show it graphicall
y, the dataset given below.
Task:
1. fitting it to the periodic function
2. plot the fit
Data
Max = 39, 41, 43, 47, 49, 51, 45, 38, 37, 29, 27, 25
Min = 21, 23, 27, 28, 32, 35, 31, 28, 21, 19, 17, 18

In [1]:
```
import matplotlib.pyplot as plt
import numpy as np
from scipy.optimize import curve_fit
import math
```

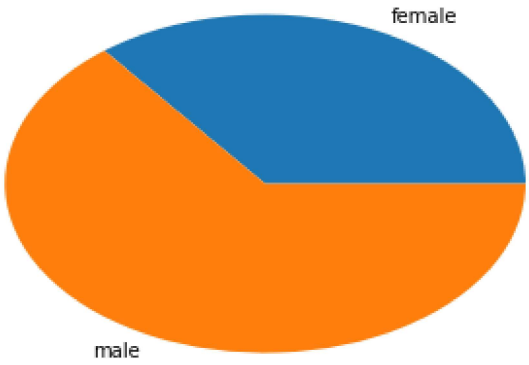
In [24]:
```
Max=np.asarray([39, 41, 43, 47, 49, 51, 45, 38, 37, 29, 27, 25])
Min=np.asarray([21, 23, 27, 28, 32, 35, 31, 28, 21, 19, 17, 18])
Months = np.arange(12)

p1=np.polyfit(Months,Max,4)
p2=np.polyfit(Months,Min,4)

days = np.linspace(0, 12, num=365)

plt.figure()
plt.plot(Months, Max, 'ro')
plt.plot(days,np.polyval(p1,days),'r-')
plt.plot(Months, Min, 'bo')
plt.plot(days,np.polyval(p2,days),'b-')

plt.xlabel('Month')
plt.ylabel('Temperature ($^\circ$C)')

plt.show()
```



This assignment is for visualization using matplotlib:

data to use:
url= https://raw.githubusercontent.com/Geoyi/Cleaning-Titanic-Data/master/titanic_original.csv
titanic = pd.read_csv(url)
Charts to plot:
1. Create a pie chart presenting the male/female proportion

In [3]:
```
import pandas as pd
url="https://raw.githubusercontent.com/Geoyi/Cleaning-Titanic-Data/master/titanic_
titanic = pd.read_csv(url)
sums=titanic.groupby("sex").pclass.count()
plt.pie(sums, labels=sums.index)
plt.show()
```



2. Create a scatterplot with the Fare paid and the Age, differ the plot color by gender

In [18]:
```
plt.scatter(titanic['age'],titanic['fare'],c=titanic["sex"].map({'male':0,'female
```

Out[18]: <matplotlib.collections.PathCollection at 0x1ca6c9cf3c8>