1. Chef is a software developer, so he has to switch between different languages sometimes. Each programming language has some features, which are represented by integers here.

```
for i in range(int(input())):
        a,b,a1,b1,a2,b2 = map(int,input().split())
        if (a==a1 or a==b1) and (b==-a1 or b==b2):
                print(1)
        elif (a==a2 or a==b2) and (b==a2 or b==b2):
                print(2)
        else:
print(0)
```

2. Find the maximum number of problem sets you can create using the four problems

```
for t in range (int(input())):
        a = list(map(int,input().split()))
        b = set(a)
        if len(a)==1:
                print(0)
        elif len(a)==2 and b.count(b[0])!=2:
                print(1)
        else:
        print(2)
```

3. Develop a python code to check given two dates d1 and d1 , check whether d1 is less than d2 or d1 is greater than d2 or d1 is equal to d2. (Hint: overload < , > , == operators)

```
import datetime

d1 = datetime.datetime(2020, 5, 3)

d2 = datetime.datetime(2018, 6, 1)

print("d1 is greater than d2 : ", d1 > d2)

print("d1 is less than d2 : ", d1 < d2)

print("d1 is not equal to d2 : ", d1 != d2)
```

4. Develop python code to add, subtract , multiply and divide two distances where each distance contains two things of the format KM followed by Meters.

```
dis1 = float(input("Enter first Distence as KM.MM :"))
dis2 = float(input("Enter second Distence as KM.MM :"))

char = input("Enter the operation would you like to perfom(+,-,*,/) :")
result = 0
if char == '+':
        result = dis1 + dis2
elif char == '-':
        result = dis1 - dis2
elif char == '*':
        result = dis1 * dis2
elif char == '/':
        result = dis1 / dis2
else:
        print("Please enter the above charaters only")

print(dis1,char,dis2, ':',result,"Km")
```

5. Develop a class called Box with attributes length, breadth, depth and define required constructor and other relevant methods.

```
from operator import length_hint

class Box:
def __init__(self,Length,Breadth,Depth):
        self.Length = Length
        self.Breadth = Breadth
        self.Depth = Depth

def display(self):
        print("Length: ",self.Length)
        print("Breadth: ",self.Breadth)
        print("Depth :",self.Depth)

volume = (self.Length*self.Breadth*self.Depth)
print("Volume of the given cube is :",volume)

class WeightBox(Box):
        def __init__(self,Length,Breadth,Depth,Weight):
Box.__init__(self,Length,Breadth,Depth)
self.Weight = Weight

def display(self):
        Box.display(self)
print("Weight: ",self.Weight)
class Colour(WeightBox):
def __init__(self,Length,Breadth,Depth,Weight,colour):
WeightBox.__init__(self,Length,Breadth,Depth,Weight)
self.colour=colour
```

```
def display(self):
        print("Length: ",self.Length)
        print("Breadth: ",self.Breadth)
        print("Depth: ",self.Depth)

volume = (self.Length*self.Breadth*self.Depth)
print("Volume of the given cube is :",volume)
print("Weight: ",self.Weight)
print("Colour: ",self.colour)

e = Colour(4,5,6,"2KG","Red")
e.display()
```