1. Write a program to adding temperature with OOP and Magic method (__add__)

```
1
2  class temperature:
3
4      def __init__(self, celsius=None):
5          self.celsius = celsius
6
7      def __add__(self, x):
8          temp = temperature()
9          temp.celsius = self.celsius + x.celsius
10         return temp
11
12
13     def __str__(self):
14         return 'Temperature: '+str(self.celsius)+' C'
15
16
17 if __name__ == "__main__":
18     t1 = temperature(30)
19     t2 = temperature(42)
20     t3 = t1 + t2
21     print(t1)
22     print(t2)
23     print(t3)
```

Output

```
Temperature: 30 C
Temperature: 42 C
Temperature: 72 C
```

2. Write a program to calculate total distance (foot + inch) with OOP and Magic Method

```
class distance:
    def __init__(self, x=None, y=None):
        self.ft = x
        self.inch = y

    def __add__(self, x):
        temp = distance()
        temp.ft = self.ft+x.ft
        temp.inch = self.inch+x.inch

        if temp.inch >= 12:
            temp.ft += 1
            temp.inch -= 12
        return temp

    def __str__(self):
        return 'ft:'+str(self.ft)+' in: '+str(self.inch)

if __name__ == "__main__":
    d1 = distance(4, 10)
    d2 = distance(2, 6)
    d3 = d1 + d2
    print(d1)
    print(d2)
    print(d3)

```

Output

```
ft:4 in: 10
ft:2 in: 6
ft:7 in: 4
```

3. Write a program to compare temperature of two city to find which one colder using Magic method

```
class temperature:
    def __init__(self, celsius=None):
        self.celsius = celsius

    def __ge__(self, x):
        if(x.celsius >= self.celsius):
            return False
        else:
            return True

    def __str__(self):
        return 'Temperature: '+str(self.celsius)+' C'

if __name__ == "__main__":
    t1 = temperature(52)
    t2 = temperature(44)
    print(t1)
    print(t2)
    print('T1 >= T2: ' + str(t1 >= t2))
```

Output

```
Temperature: 52 C
Temperature: 44 C
T1 >= T2: True
```