```cpp
      #include <bits/stdc++.h>
      #include "Benefit.hpp"
      using namespace std;

 5    int main() {
          DonationManager m;
          Individual *i1 = new Individual("a");
          Individual *i2 = new Individual("b");
          Individual *i3 = new Individual("c");
10        Individual *i4 = new Individual("d");
          Individual *i5 = new Individual("e");
          Individual *i6 = new Individual("f");
          Individual *i7 = new Individual("g");
          Population *p1 = new Population("p1");
15        Population *p2 = new Population("p2");
          Population *p3 = new Population("p3");
          Region     *r1 = new Region("r1");
          Region     *r2 = new Region("r2");
          //regista os benificiarios no registo, fazemos isto para nao termos de tratar
20        //de memoria dentro do DonationManager
          m.registerBeneficiary(*i1);
          m.registerBeneficiary(*i2);
          m.registerBeneficiary(*i3);
          m.registerBeneficiary(*i4);
25        m.registerBeneficiary(*i5);
          m.registerBeneficiary(*i6);
          m.registerBeneficiary(*i7);
          m.registerBeneficiary(*p1);
          m.registerBeneficiary(*p2);
30        m.registerBeneficiary(*p3);
          m.registerBeneficiary(*r1);
          m.registerBeneficiary(*r2);

          //regiao 1:
35        p1->addBeneficiary(*i1);
          p1->addBeneficiary(*i2);
          p2->addBeneficiary(*i3);
          r1->addBeneficiary(*p1);
          r1->addBeneficiary(*p2);
40
          //regiao 2:
          p2->addBeneficiary(*i4);
          p3->addBeneficiary(*i5);
          p3->addBeneficiary(*i6);
45        r2->addBeneficiary(*p3);
          r2->addBeneficiary(*i7);

          //doacoes ao calhas:
          m.giveDonation(*i1, 10.0);
50        m.giveDonation(*i3, 10.0);
          m.giveDonation(*r1, 10000.0);
          m.giveDonation(*r2, 10.0);
          m.giveDonation(*p1, 50.0);

55        //imprrimir os resultados
          cout << (const Beneficiary &) *i1 << endl; //[3761328176]  a:  2535
          cout << (const Beneficiary &) *i2 << endl; //[814609577]   b:  2525
          cout << (const Beneficiary &) *i3 << endl; //[280156718]   c:  2510
          cout << (const Beneficiary &) *i4 << endl; //[137697743]   d:  2500
60        cout << (const Beneficiary &) *i5 << endl; //[831733596]   e:  2.5
          cout << (const Beneficiary &) *i6 << endl; //[1445474917]  f:  2.5
          cout << (const Beneficiary &) *i7 << endl; //[227961658]   g:  5
```

```
        cout << (const Beneficiary &) *p1 << endl; //[1184072683]  p1: 5060
        cout << (const Beneficiary &) *p2 << endl; //[834860360]   p2: 5010
65      cout << (const Beneficiary &) *p3 << endl; //[342790113]   p3: 5
        cout << (const Beneficiary &) *r1 << endl; //[1274020102]  r1: 10070
        cout << (const Beneficiary &) *r2 << endl; //[1176794055]  r2: 10

    }
```