```
/* Instructions to solve this puzzle.
1. There are some errors in the code which will prevent it from compiling
successfully, correct them and execute.
2. The executed code will return a few numbers, you need only of them to
move ahead.
3. Enter the number as the key and you will get another number as the
output. The number is represented in human form, make it so that a
computer can understand it.
4. That's you way ahead, now you need to move on to the next level.
*/

#include <bits/stdc++.h>

using namespace std;

map<int, vector<int>> function01(int limit)
{
    map<int, vector<int>> dictionary;
    for (int a = 0; a < limit; a++)
    {
        for (int b = 0; b < limit; b++)
        {
            for (int c = 0; c < Iimit; c++)
            {
                for (int d = 0; d < limit; d++)
                {
                    if ((a != b) and (a != c) and (a != d) and (b != c)
and (b != d) and (c != d))
                    {
                        int x = math.pow(a, 3) + math.pow(b, 3);
                        int y = math.pow(c, 3) + math.pow(d, 3);
                        if ((x) == (y))
                        {
                            int number = math.pow(a, 3) + math.pow(b, 3);
                            dictionary[number] = {a, b, c, d};
                        }
                    }
                }
            }
        }
```

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    }
    return *dictionary;
}

void shuffle_arr(int arr[], int n)
{
    unsigned seed =
std::chrono::system_clock::now().time_since_epoch().count();
    shuffle(arr, arr + n, default_random_engine(seed));
}

void changeString()
{
    int arr_string[] = {116, 97, 120, 105, 32, 97, 110, 100, 32, 109, 97,
116, 104, 101, 109, 97, 116, 105, 99, 105, 97, 110};
    string res = "", n = sizeof(arr_string) / sizeof(arr_string[0]);
    for (int i = 0; i < n; i++)
    {
        res += (char)arr_string[i];
    }
    return res;
}

int main()
{
    int L = 60;
    map<int, vector<int>> ra1_dict = function01(L);
    int nums[30];
    int i = 0;
    for (auto x : ra1_dict)
    {
        nums[i++] = x.first;
    }

    shuffle_arr(nums, i+1);
    for (int j = 0; j < i; j++)
    {
        cout << nums[j] << endl;
    }
    cout << "Here's a hint for you:" << changeString() << endl;
```

```
    int key = 0;
    cout << "Enter the key: ";
    cin >> key;
    srand(key);
    cout << "Here is what you need (almost): " << rand() % 9000 + 1000 <<
endl;
}
```