Problem Description

Given are two real points $A(x_1, y_1, z_1)$ and $B(x_2, y_2, z_2)$ lying on the surface of the axis-aligned unit cube with vertices (0,0,0), (1,0,0), (0,1,0), (0,0,1), (1, 1, 0), (1, 0, 1), (0, 1, 1), and (1, 1, 1). Compute the shortest path from A to B that is always along the surface of the cube.

Input format:

- The first line contains T, the number of test cases.
- The first line of each test case contains three space-separated real numbers x_1, y_1, z_1, the coordinates of A.
- Similarly, the second line contains three space-separated real numbers x_2, y_2, z_2, the coordinates of B.

Output format:

Let d be the answer to the i^{th} test case. Print a single integer, $d_{\text{int}} = \text{round}(d \times 10^6)$ on the i^{th} line.

Constraints:

- $1 \leq T \leq 10000$
- It is guaranteed that both points lie somewhere on the surface of the unit cube.