

Because of the long distance between the Earth and the Mars, radio signals sent back from robot will most likely be degraded along the way. Therefore, it is a rule of thumb to avoid transmitting too many or too lengthy signals. NASA scientists agree that at step 2, robot should plan to minimize the surface area of the route.

Input

There will be a number of lines each one which contains 6 numbers: $M, N, r_A, s_A, r_B,$ and s_B describing one test case. M is the number of rings. N is the number of strips. r_A and s_A is the ring index and the strip index of point A. r_B and s_B is the ring index and the strip index of point B. The input satisfies $2 \leq M, N \leq 100$; $0 \leq r_A, r_B \leq M - 1$; $0 \leq s_A, s_B \leq N - 1$. There are no more than 250 test cases.

Output

Output should consist of the same number of lines with that of the input. Line i -th contains one real number which is the minimum surface area for test case i -th printed to exactly 3 decimal digits.

Sample

Sample input	Output for sample input
2 2 0 0 1 1	62831.853
8 9 0 3 7 3	13962.634