Circles

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Given four cartesian points (X_1, Y_1), (X_2, Y_2), (X_3, Y_3) and (X_4, Y_4) that donate two endpoints of a diameter of circle A and circle B respectively. Determine whether these two circles intersect or not.

Input

First line contains four numbers (X_1, Y_1) and (X_2, Y_2) $(-10^5 \leq X_1, Y_1, X_2, Y_2 \leq 10^5)$ two endpoints of a diameter of the circle A.

Second line contains four numbers (X_3, Y_3) and (X_4, Y_4) $(-10^5 \leq X_3, Y_3, X_4, Y_4 \leq 10^5)$ two endpoints of a diameter of the circle B.

Output

Print "**YES**" if circle A intersect circle B otherwise, print "**NO**".

Examples

standard input	standard output
1 2 1 -2 4 3 1 0	YES
0 0 6 0 -8 7 -12 2	NO