

Overview:	Determine whether there exists a contiguous sum in an array that is equal to K .
Description:	<p>Hey look, someone just made a reference around Captain America, aka Steve Rogers! Steve would like to figure out if he understands that reference. Steve has an array of N integers in his head, representing facts that he knows. The reference has value K, so if there is a contiguous subarray of facts whose sum is equal to K, then Steve has enough knowledge to have understood that reference.</p> <p>To illustrate what is contiguous sum, here is an example: a sample array is $\{1, 4, -8\}$. Then all possible contiguous sums are (note that an empty array is also a subarray):</p> <ul style="list-style-type: none">0: $\{\}$1: $\{1\}$4: $\{4\}$-8: $\{-8\}$5: $\{1, 4\}$-4: $\{4, -8\}$-3: $\{1, 4, -8\}$ <p>Since computer science didn't become popularized until well after Steve was frozen in time, he doesn't know how to determine whether he understands that reference. Fortunately, as an adept programmer, you might be able to do so! Can you figure it out?</p>
Filename:	adv52.{java, cpp, c, cc, py}
Input:	The first line is K and the second line is N . The rest of the lines are the integers in the array; one number per line.
Output:	YES if such contiguous subarray exists, or NO if it does not exist. (Note, both YES and NO are capitalized.)
Assumptions:	<p>Integers can be positive, negative or zero. The array is NOT sorted.</p> <p>$1 < N < 200,000$</p> <p>$-1,000,000 < K < 1,000,000$</p> <p>All values in the array are between -1,000 and 1,000 inclusive</p>
Sample Input #1:	0 3 1 4 -8
Sample Output #1:	YES
Sample Input #2:	6 3 1 4 -8
Sample Output #2:	NO

