```c
#include <stdio.h>

int check_if_AM(int* arr, int N, int M){
    for(int i = 0; i < N; i++){
        for (int j = i + 1; j < N; j++){
            long sum = (long)arr[i] + (long)arr[j];
            // If sum is odd - no point in checking
            if(sum % 2 == 0){ // Handle cases like 13.5
                sum /= 2;
                if(M == sum)
                    return 1;
            }
        }
    }
    return 0;
}


int check_if_GM(int* arr, int N, int M){
    long M_sq = (long)M * (long)M;
    for(int i = 0; i < N; i++){
        for(int j = i + 1; j < N; j++){
            long prod = (long)arr[i] * (long)arr[j];
            if(prod == M_sq)
                return 1;
        }
    }
    return 0;
}


int main(){
    int N, m;
    scanf("%d %d", &N, &m);
    int arr[m];
    for(int i = 0; i < m; i++)
        scanf("%d", arr + i);
    int is_AM = check_if_AM(arr, m, N);
    int is_GM = check_if_GM(arr, m, N);

    if(is_AM)
        printf("YES\n");
    else
        printf("NO\n");

    if(is_GM)
        printf("YES\n");
    else
        printf("NO\n");

    if(is_AM && is_GM)
        printf("YES");
    else
        printf("NO");

    return 0;
}
```