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#include <stdio.h>

int isPrime(int n){
    int i;
    if(n < 2)
        return n;
    for(i = 2; i < n; i++){
        if(n % i == 0)
            return 0;
    }
    return 1;
}

int main(){
    int n, m, i, j, num, numOnes = 0, numRows, numCols, size;
    scanf("%d %d", &n, &m);

    for(i = 0; i < n; i++){
        for(j = 0; j < m; j++){
            scanf("%d", &num);
            numOnes += num;
        }
    }

    size = 0;
    for(numRows = 1; numRows <= n; numRows++){
        // How many columns would we need if we try to
        // fit size 1s in numRows rows?
        // Some 1s may be left out but that is okay
        numCols = numOnes/numRows; // Discard remainder
        if(numCols <= m) // We have enough columns
            if(numCols * numRows > size) // Yay! We fit more 1s
                size = numCols * numRows;
    }

    // If we never went inside the body of if, then
    // numOnes must have been zero
    printf("%d\n%d\n%d", numOnes, isPrime(numOnes), size);
    return 0;
}
```