

Problem M

Virtual Reality Playspace

Time Limit: 4 seconds

Yolanda just finished moving the furniture around her house. Her house is shaped like a rectangle of side lengths r and c . Yolanda wants to choose a place to put her virtual reality (VR) playspace.

Yolanda has some standards for how a VR playspace should be positioned:

- It should take the shape of a rectangle.
- Its sides should be parallel and perpendicular to the sides of her house.
- It must exactly cover the entirety of any unit square it occupies.
- It should contain no obstacles.
- It should be at least s units across along one side, and at least t units across along the other.
- Each of its sides must border either the house's outer walls, or obstacles. In other words, a VR playspace is maximally-sized.

Given a map of Yolanda's house, Yolanda wants to know how many different places she can choose for her VR playspace.

Input

The first line of input contains four integers r , c , s , and t ($1 \leq r, c, s, t \leq 3\,000$), giving the length and width of Yolanda's house and the size of her VR playspace.

The next r lines each contain a string of c characters describing Yolanda's house. Each character is either a dot (.) that denotes an empty square unit of space, or a zero (0) that denotes a square unit of obstacle.

Output

Output a single integer, the number of different places Yolanda can choose for her VR playspace.



Sample Input 1

```
4 7 1 2
.....00
.0...0.
..00.0.
.0.0.00
```

Sample Output 1

```
6
```