



## Sample Input 1

---

```
3 7
.....
.M-.-Z.
.....
```

## Sample Output 1

---

```
2 4 -
```

## Sample Input 2

---

```
3 5
..1-M
1-+..
Z.23.
```

## Sample Output 2

---

```
2 4 4
```

## Sample Input 3

---

```
6 10
Z.1----4..
|.|. ....|..
|..14..M..
2-+++4....
..2323....
.....
```

## Sample Output 3

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