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## [hack3prob1] Problem 1

### Statement

Compute  $m$  raised to  $k$ .

Design an algorithm that has worst case running time polynomial in size of  $k$ .

Max score is capped at 10 if you use an exponential time algorithm.

Refer to Hackathon3 problem sheet for full details.

### Input Format

$m \ k \backslash n$

### Output Format

$m^k \backslash n$

Max. Score	10
Difficulty	0
Time limit	1.0 s
Memory limit	10240 KB
Submission limit	3
Allowed file extensions	.c

### Public test cases

#### Test Case 1

Input

```
6058 4
536079964 2
43594840 2
4260 4
5 8
3 4
8 6
9 9
3 6
31 8
9286657 2
78259 2
18 2
28 4
4884 3
6 2
```

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### Output

```
1346843318004496
287381727802241296
1900510074625600
329335385760000
390625
81
262144
387420489
729
852891037441
86241998235649
6124471081
324
614656
116500279104
36
```

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### Test Case 2

#### Input

```
9 18
6 9
8905 3
33 4
4621 4
216 2
1252131 3
10666 4
85882 3
373 5
7342 3
4780042 2
868847 2
66 7
3 40
639 3
```

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#### Output

```
150094635296999121
10077696
706157817625
1185921
455977983956881
46656
1963131101530964091
12942146673765136
633441406748968
7220115733093
395770245688
22848801521764
754895109409
5455160701056
12157665459056928801
260917119
```

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## Submit Solution for Problem 1

Submissions left: 1

## Submissions Over!

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