

Ackermann Function

Ackermann function formula is:

$$A(m, n) = \begin{cases} n + 1 & \text{if } m = 0 \\ A(m - 1, 1) & \text{if } m > 0 \text{ and } n = 0 \\ A(m - 1, A(m, n - 1)) & \text{if } m > 0 \text{ and } n > 0. \end{cases}$$

Format Input

Contains 2 integer M and N stating the given value of ackermann function.

Format Output

Output of the calculation with a format “result: X”, where X is the result of ackermann function

Constraints

- $1 \leq M \leq 3$
- $1 \leq N \leq 10$

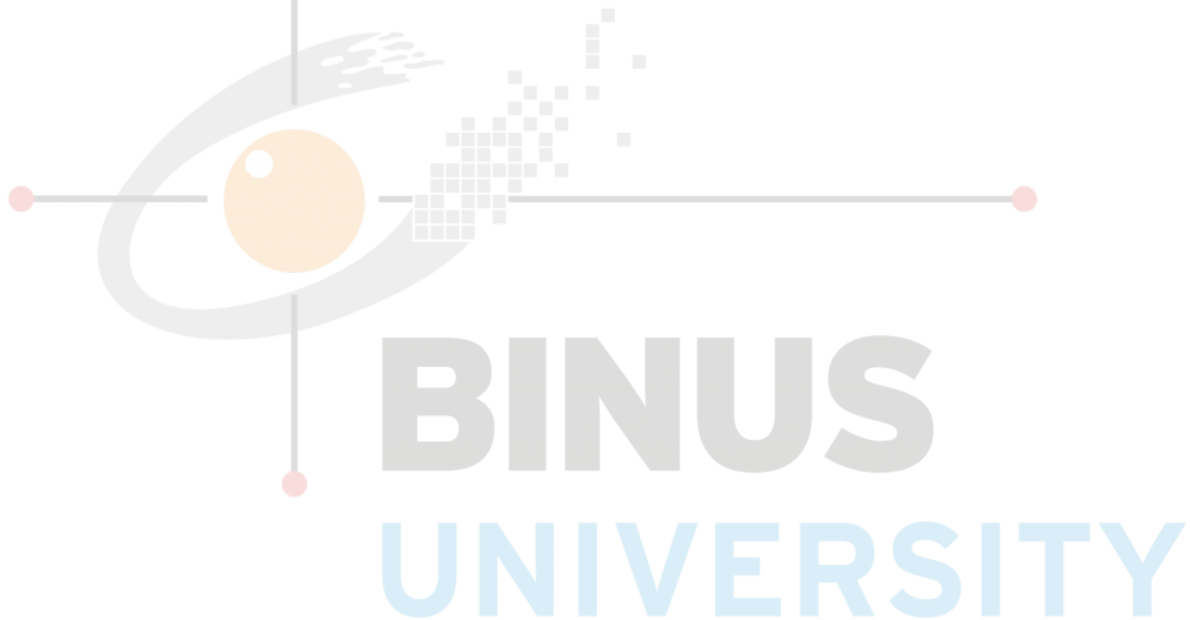
Sample Input 1 (standard input)

```
2 1
```

Sample Output 1 (standard output)

```
result: 5
```

Note

$$\begin{aligned} A(2, 1) &= A(1, A(2, 0)) \\ &= A(1, A(1, 1)) \\ &= A(1, A(0, A(1, 0))) \\ &= A(1, A(0, A(0, 1))) \\ &= A(1, A(0, 2)) \\ &= A(1, 3) \\ &= A(0, A(1, 2)) \\ &= A(0, A(0, A(1, 1))) \\ &= A(0, A(0, A(0, A(1, 0)))) \\ &= A(0, A(0, A(0, A(0, 1)))) \\ &= A(0, A(0, A(0, 2))) \\ &= A(0, A(0, 3)) \\ &= A(0, 4) \\ &= 5 \end{aligned}$$


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Rumus dari Ackermann function adalah:

$$A(m, n) = \begin{cases} n + 1 & \text{if } m = 0 \\ A(m - 1, 1) & \text{if } m > 0 \text{ and } n = 0 \\ A(m - 1, A(m, n - 1)) & \text{if } m > 0 \text{ and } n > 0. \end{cases}$$

Format Input

Berisi 2 bilangan bulat M dan N yang menyatakan nilai fungsi ackermann

Format Output

Output dari perhitungan dengan format “result: X”, dimana X adalah hasil dari ackermann function

Constraints

- $1 \leq M \leq 3$
- $1 \leq N \leq 10$

Sample Input 1 (standard input)

```
2 1
```

Sample Output 1 (standard output)

```
result: 5
```

Note

$$\begin{aligned} A(2, 1) &= A(1, A(2, 0)) \\ &= A(1, A(1, 1)) \\ &= A(1, A(0, A(1, 0))) \\ &= A(1, A(0, A(0, 1))) \\ &= A(1, A(0, 2)) \\ &= A(1, 3) \\ &= A(0, A(1, 2)) \\ &= A(0, A(0, A(1, 1))) \\ &= A(0, A(0, A(0, A(1, 0)))) \\ &= A(0, A(0, A(0, A(0, 1)))) \\ &= A(0, A(0, A(0, 2))) \\ &= A(0, A(0, 3)) \\ &= A(0, 4) \\ &= 5 \end{aligned}$$
