

Problem A – *u* Calculate *e*

Background

A simple mathematical formula for *e* is

$$e = \sum_{i=0}^n \frac{1}{i!}$$

where *n* is allowed to go to infinity. This can actually yield very accurate approximations of *e* using relatively small values of *n*.

Output

Output the approximations of *e* generated by the above formula for the values of *n* from 0 to 9. The beginning of your output should appear similar to that shown below.

Example

Output

```
n e
- ----
0 1
1 2
2 2.5
3 2.666666667
4 2.708333334
```