PROBLEM SOLVING :

factorial :   # fact of 0 ⇒ 1

5! ⇒   1 × 2 × 3 × 4 × 5   ⇒ 120

6! ⇒   1 × 2 × 3 × 4 × 5 × 6 ⇒ 720

```
start    = 1
n        = int(input())

⇒   n = 5
  fact = 1

⇒      while  start <= n :

              fact  * =  start
              start  + =  1

      print(fact)
```

Problem 2:

factors : A number that can divide exactly
to 0 is known as factor.
└─ remainder == 0

n = 5 :   1 , 5

if   n % i == 0
        print (i is factor of n)

Problem : Sum of digits

n =   101012

Sum   = 0 1 2 3 4 4 5

last   =   n % 10   => 2 1 0 1 0 1

chop off last digit

n =   n // 10   => 10101 1010 101 10 10

Problem :   Reverse a number

$$\left\{ \begin{array}{l} n = \; 123 \\ o/p \; = \; 321 \end{array} \right.$$

$$\left\{ \begin{array}{l} rev \; = \; 0 \\ rev : \; 3 \times 10 \Rightarrow 30 + 2 \\ \qquad \Rightarrow \quad 32 \\ rev \Rightarrow \quad 32 \times 10 \Rightarrow 320 + 1 \\ \qquad \Rightarrow \quad 321 \end{array} \right.$$

$$\frac{3}{0^{th}} \quad \frac{2}{(,10^{th}} \quad \frac{1}{(, 100^{th}}$$

$$\left\{ \begin{array}{l} rev \qquad = \; 0 \\ \\ last \quad = \; n \; \% \; 10 \\ \\ rev \quad = \; rev \times 10 \; + \; last \\ \\ \# \quad chop \; off \; last \; digit \\ \\ n \quad = \; n \; // \; 10 \end{array} \right.$$