$$
\begin{array}{r}
1\ 2\ 3 \leftarrow a[\ ]\\
4\ 5\ 6 \leftarrow b[\ ]\\
\hline
+\ \ \ \ \ \ \ \ \ \ \ \\
\hline
5\ 7\ 9 \leftarrow c[\ ]
\end{array}
$$

input 123 $\longrightarrow$ a[ ]

char s[10];
scanf("%s", s);

a	0	1	2	3
	1	2	3	

int S;
scanf("%d", &S);

(s[0]) s[1] · · — — s[9]

(s)

int a[10];

int i=1; i<=n; i++)
scanf("%d", a+i);

&a[i]

a+i

scanf → C
cin → C++

char s[10];
scanf("%s", s);   (cin >> s;)

int

a	0	1	2	3
	1	1	1	3

char 123

s	[0]	[1]	[2]
	1	2	3

int (s[i-1))

```
for(i=1; i<=..., i++)  a[i] = int...
                        a[i] = s[i-1] - 48;
strlen(s)                                        隐式转换

ascii    0~12]
       '0'~'9'
                        48 ~ 57]

a ∈ '0'~'9'
   [a-48]  →  int
```

a	0	1	2	3
	1	2	3	

b	0	1	2	3
	4	5	6	

c	0	1	2	3
	5	7	9	

```
a[3]+b[3]
a[2]+b[2]
a[1]+b[1]
```

```
for (int i=1; i<=3; i++)
    cout << c[i];
if (c[0]>0)  cout << c[0];
```

```
5 7 9

  45 9
  372
+ ___
```

a	0	1	2	3

b	0	1	2	3

$$c[i] = a[i] + b[i]$$
if (c[i] > 9) {
 d[i] = 1
 c[i] -= 10;
}

c	0	1	2	3
	1	2	3	1

| | | 1 | 1 | 1 |

$c[i] = a[i] + b[i] + d[i+1]$
if (c[i] > 9) {
 d[i] = 1
 c[i] -= 10;
}
if (d[i] = 1) {
 c[0] = 1;
}

(456)

$$
\begin{array}{c|c|c|c|c}
a & 0 & 1 & 2 & 3 \\
\hline
 & 6 & 5 & 4 \\
\end{array}
$$

with markers: 10^0, 10^1, 10^2
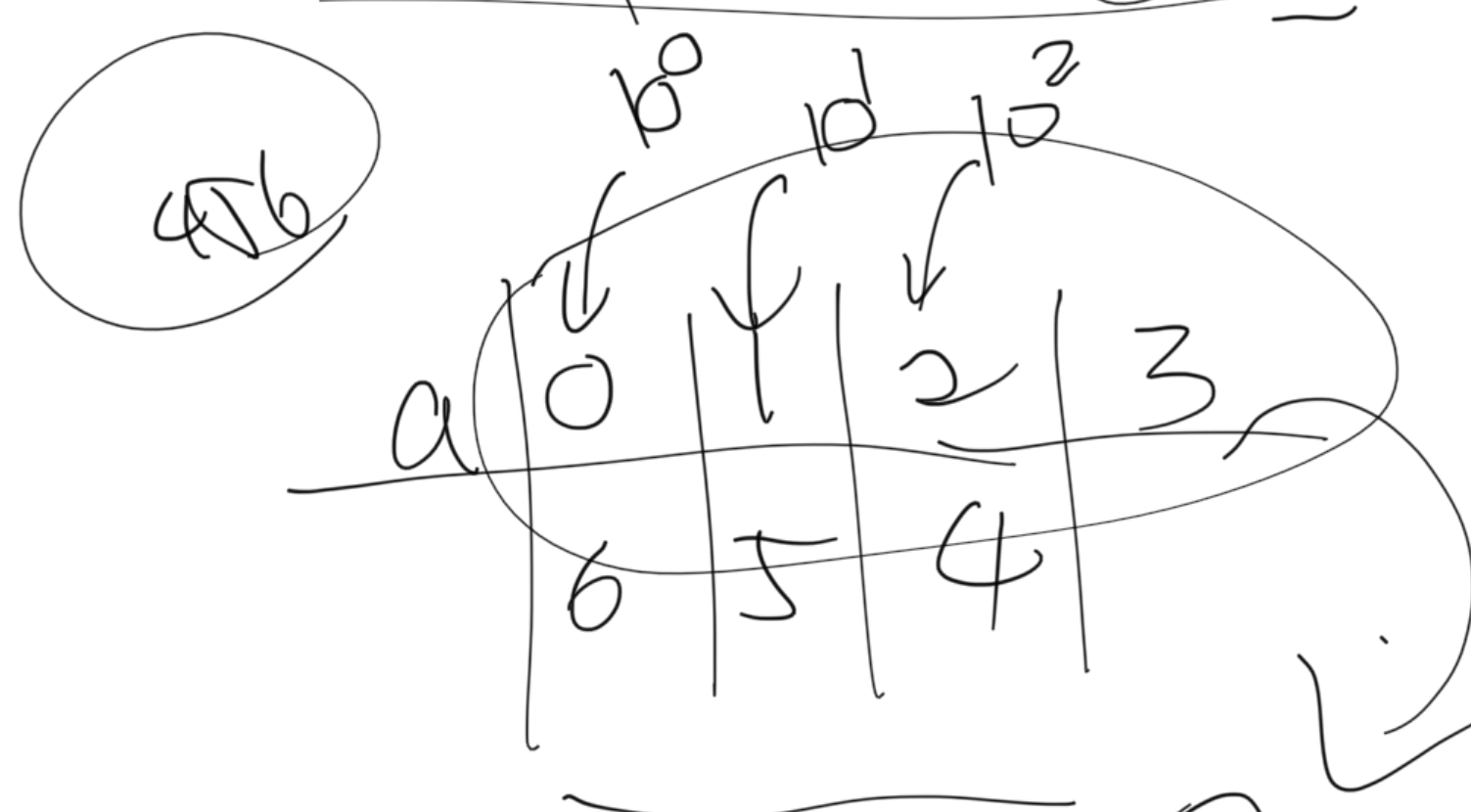
$$456 = 4 \times 10^{\,2} + 5 \times 10^{\,1} + 6 \times 10^{\,0}$$

astr

a	0	1	2	3
	3	2	1

bstr

b	0	1	2	3
	6	5	4

c	0	1	2	3
	9	7	5

$$\Rightarrow \boxed{c[i] = a[i] + b[i]}$$

$$(0 \le i \le \underline{maxf})$$

$maxf = max(\,strlen(astr),\ strlen(bstr)\,)$

$maxf$ $maxf+1$ 3   4

$$
\begin{array}{r}
426 \\
+\ 279 \\
\hline
205
\end{array}
$$

a	0	1	2	3
	6	5	4	

b	0	1	2	3
	9	7	7	

c	0	1	2	3
	15	14	11	

```
for ( int i=0; i < maxl ; i++)
    c[i+1] += c[i] / 10;
    c[i] %= 10;

if ( c[maxl] > 0)                maxl++;
for (int i= maxl -1; i >=0 ; i--)
    cout << c[i];
```

	0	1	2	3
a		6	5	4
b		9		
ⓒ		5	1	

$$c[i] = a[i] + b[i]$$

$$\boxed{c[i] += a[i] + b[i]}$$

a	3	2	1	0
	1	2	3	4
b	3	2	1	0
	3	2	1	6

```
c[0] += a[0] x b[0]
c[1] += a[1] x b[0]
c[1] += a[0] x b[1]
c[2] += a[2] x b[0]
c[2] += a[1] x b[1]
c[2] += a[0] x b[2]
```

6	12	18	24
10	15	20	

$c[2] +=$ ...

$0.$

$$C[i] = \begin{cases} a[0] \times b[i] \\ + a[i] \times b[i-1] \\ + a[2] \times b[i-2) \\ \vdots \\ + a[i] \times b[0] \end{cases}$$