

**STATE**

**x=2;**

**TRANSFOR-  
MATION**

**REPEATING**

with

**CONDITION**



$$m = (y * n) + x$$

$$m = 7$$

$$n = 2$$

Integer remainder

$$x = 7 \% 2 = 1$$

Integer division

$$y = 7 / 2 = 3$$

```
int x=m; int y=0;
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
```

x	y
7	0
5	1
3	2
1	3
1	3
1	3

$$(y*n)+x$$

```
int x=m; int y=0;
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
```

x	y	
7	0	7
5	1	7
3	2	7
1	3	7
1	3	7
1	3	7

$$(y*n)+x$$

```
int x=m; int y=0;
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
if (x>=n){x=x-n; y=y+1;}
```

x	y	
7	0	7
5	1	7
3	2	7
1	3	7

```
int x=m; int y=0;
while (x>=n){
    x=x-n; y=y+1;
}
```

$(y*n)+x$

x	y	
7	0	7
5	1	7
3	2	7
1	3	7

