Lec12

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LCM

12
6

a	b
12	6
24	12
36	18
48	24
60	30
72	36
84	42
96	48
108	54
120	60

36	60
72	120
108	180
144	240
180	300

$$LCM(a,b) = \frac{(a \times b)}{gcd(a,b)}$$

number system

- Decimal → Binary
- Binary → Decimal

- Binary → 2 - [0,1]
- decimal → 10 - [0,9]
- Octal → 8 - [0,7]

2	39	- 1
2	19	- 1
2	9	- 1
2	4	- 0
2	2	- 0
2	1	- 1
	0	

100111

$1\times10^5 + 0\times10^4 + 0\times10^3 + 1\times10^2 + 1\times10^1 + 1\times10^0$

$100000 + 0 + 0 + 100 + 10 + 1$

1×10

10×10

100000
100
10
1
100111

Sum = 0 + 1 + 1 + 1

100111

mul = 1 10 100 1000000 sum = 0 + 1 + 111

n = 39 19 9 4 2 1 0

```
while(n>0){
    rem = n%2
    sum = sum + rem * mul
    n = n/2
    mul = mul * 10
}
sout(sum)
```

0 + 1 * 1

1 + 1 * 10 = 11

11 + 1 * 100 = 111

111 + 0 * 1000 = 111

111 + 0 * 10000 = 111

111 + 1 * 100000 = 100111

octal = 8

des number rem sec value

8 | 10	100111	$-1*2^0 = 1$
10	10011	$-1*2^1 = 2$
10	1001	$-1*2^2 = 4$
10	100	$-0*2^3 = 0$
10	10	$-0*2^4 = 0$
10	1	$-1*2^5 = 32$
	0	39