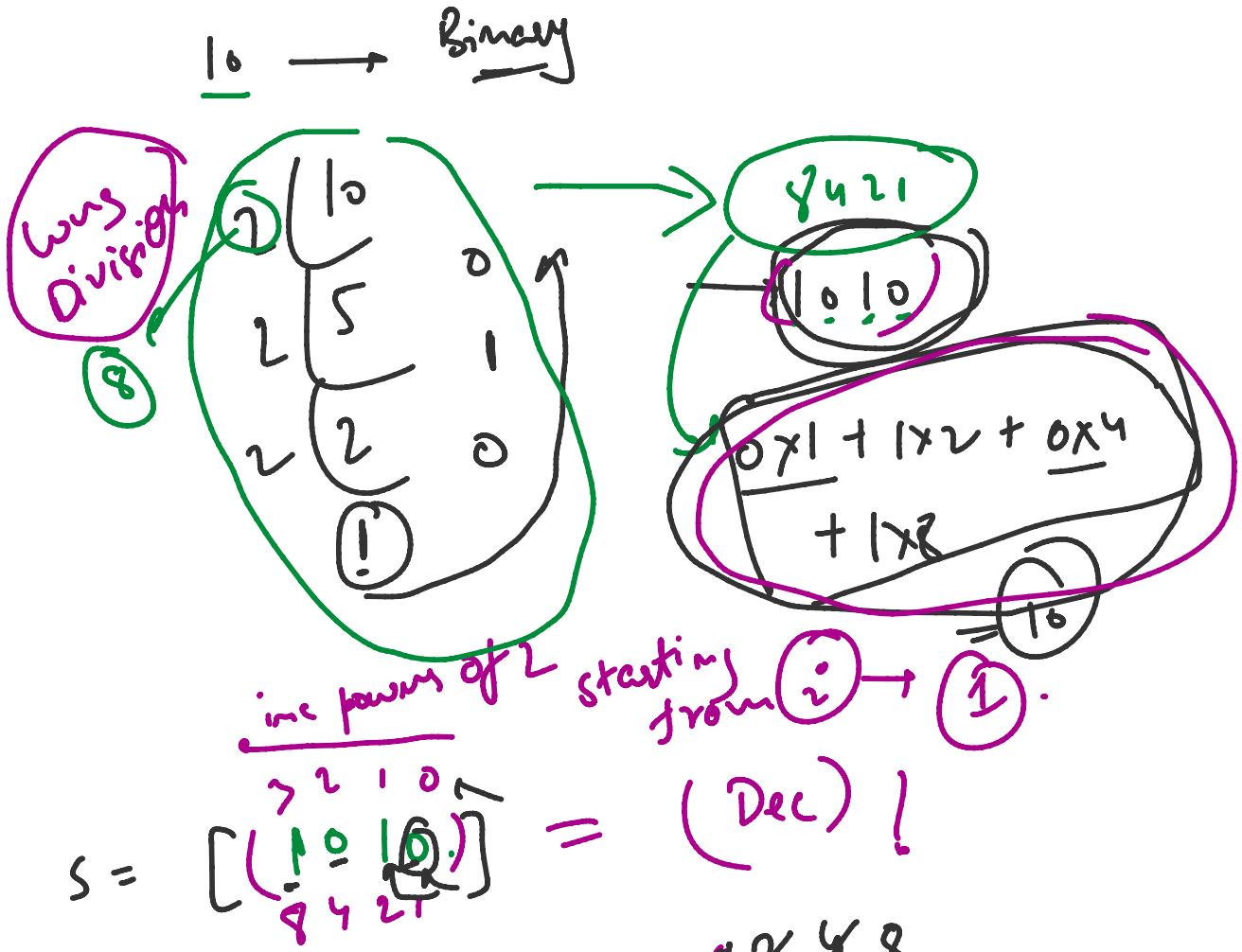
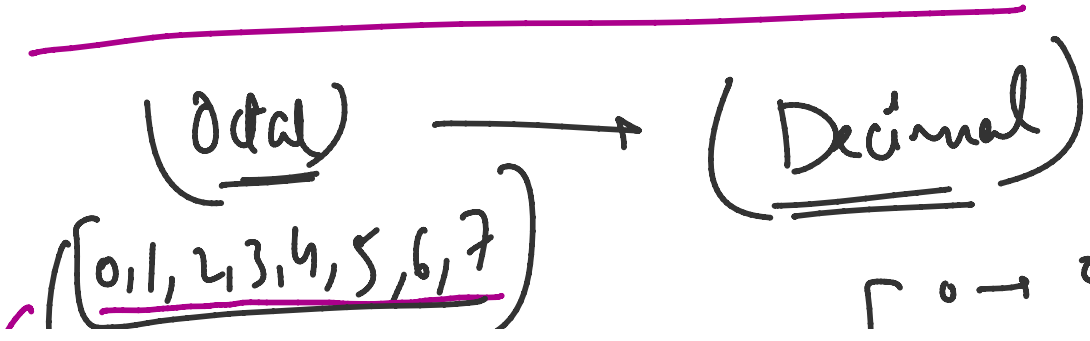
Conversion Any to Any

28 June 2023 19:37





0, 1, 2, 3, 4, 5, 6, 7

In Binary (0, 1)

power = 2^0 → ....

power = 8^0 → ....

0 → 0
1 → 1
2 → 10

$(10)_8$ → $(?)_{10}$

$8^0, 8^1, 8^2, 8^3$ ....

1st bit other bit

1 0

8^2 8^1 8^0

$0 \times 8^0 + 1 \times 8^1 = 8$

$(10A)_{16}$ → $(\quad)_{10}$

0, 1, ... 9, A, B, C, D, E, F → 16

10 11 12 13 14 15

power → $16^0, 16^1, 16^2$

2 1 0

1 0 A

16^2 16^1 16^0

$A \times 16^0 = 10 \times 1 + 0 \times 16^1 + 16^2 \times 1$

$10 + 256 = 266$

$= 10 + 256 = 266$

$(10A)_{16} = (266)_{10}$

$(8)_{10} \to (?)_8$

10

10 10

11

8 | 8 0

1

8 | 9 1

1

$(33)_8 \to (\ \ )_2$

$(27)_{10}$

$(3_{8^1}\ 3_{8^0}) = 3\times8^0 + 3\times8^1$

$= 3 + 24 = 27$.

27

1	1	0	1	1
16	8	4	2	1

$(33)_8 \rightarrow (\ ?\ )_{10}$

power = 1 →

$2\,|\,27$ — 1

$2\,|\,13$ — 1

$2\,|\,6$ — 0

$2\,|\,3$ — 1

1

11011.

ans =

1

num = 27
div = 2
13 = 13

ans = 1;
1001

long long

while (num)

ans += num % 2
ans *= 10;
num /= 2;

ans /= 10

27 → 8.

0 ≤ sb, db ≤ 16