Manual Conversion :-

Binary #: 101010

To Decimal :

32	16	8	4	2	1
1	0	1	0	1	0

↳ 32 + 8 + 2 = 42

To Octal : 2^{n-1} where n = # of digits.

$n = 6$

$2^{n-1} = 2^5 = 32$

By grouping : 101 , 010

(4 2 1) (4 2 1)

= 5 = 2

= 52

To Hexadecimal : 0010 1010

(8 4 2 1) (8 4 2 1)

2 = 2 10 = a

= 2a = 2A

Decimal: 89

To Binary:

128	64	32	16	8	4	2	1
0	1	0	1	1	0	0	1

keep ↓ subtracting

= 01011001 Go from left and

To Octal: (89/8/16...)

/8	Quotient	Remainder
89/8	11	1
11/8	1	3
1/8	0	1

↑ 131

To Hexadecimal:

/16	Quotient	Remainder
89/16	5	9
~~9~~/	0	
5/16	0	5

↑ 59

Octal: 123

To Binary: 1 2 3

1 010 011

= 1010011

~~To Octal:~~

To Decimal: $123 = (1\times8^2)+(2\times8^1)+(3\times8^0) = 83$

To Hexadecimal: 123 = 1010011

= 0101 0011

8421 8421

0101 = 5 & 0011 = 3

= 0101 0011 = 53

Hexadecimal: 1B

To Binary:

1	B = 11
0001	8 4 2 1
8 4 2 1	1 0 1 1

0001 1011 = 11011

To Octal:

4 2 1 4 2 1

0 1 1 0 1 1

3 3 = 33

To Decimal: $1B = (1 \times 16^1) + (11 \times 16^0) = (27)_{10}$

= 27