Base Conversions

B → Dec

❖ binary 10101001 =

$2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0$

128+32+8+1=169

Dec → B

Division	Quotient	Remainder
37 / 2	18	1
18 / 2	9	0
9 / 2	4	1
4 / 2	2	0
2 / 2	1	0
1 / 2	0	1

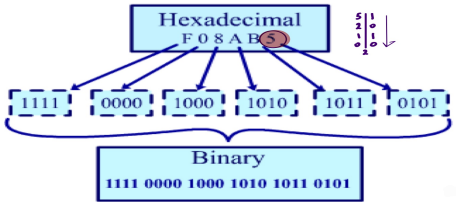
37 = 100101

B → Hex

0001 0110 1010 0111 1001 0100

1	6	A	7	9	4
0001	0110	1010	0111	1001	0100

Hex → B



Hex → Dec

1 Hex $1234_{3\,2\,1\,0}$ = $(1 \times 16^3) + (2 \times 16^2) + (3 \times 16^1) + (4 \times 16^0)$ = Decimal 4,660

2 Hex $3BA4_{3\,2\,1\,0}$ = $(3 \times 16^3) + (11 * 16^2) + (10 \times 16^1) + (4 \times 16^0)$ = 15,268 Dec

Dec → Hex

Division	Quotient	Remainder
422 / 16	26,375	16x,375 = 6
26 / 16	1,625	16x,625 = A
1 / 16	0 ,0625	16x ,0625 = 1

Decimal 422 = 1A6 hex

Hexadecimal Addition

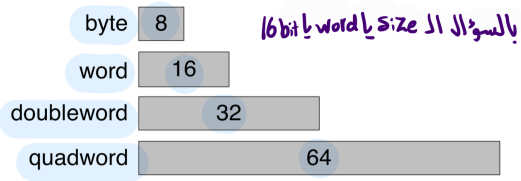
F (15) متى نقسم ؟ إذا طلع ناتج الجمع أكبر من

		1→ Q	1→ Q
36	28	28	6A → 10
42	45	58	4B → 11
78	6D	80]R	B5]R

مثال من الدكتورة:

1→ Q
1 A C 12
B 3 8 8
C E 4]R

Integer Storage Sizes



يقول بالسؤال الـ size يا word 16bit

Areen-xx3