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1. Decimal to Binary

a. 55

55/2	27	1
27/2	13	1
13/2	6	1
6/2=	3	0
3/2=	1	1
1/2=	0	1

55 = 110111b

b.1011

1011/2=	505	1
505/2	252	1
252/2=	126	0
126/2=	63	0
63/2=	31	1
31/2	15	1
15/2	7	1
7/2=	3	1
3/2=	1	1
1/2=	0	1

1011 = 1111110011b

2. Binary to Decimal

a. 1001 1001b

(0*2)+**1**=		1
(1*2)+**0**=		2
(2*2)+**0**=		4
(4*2)+**1**=		9
(9*2)+**1**=		19
(19*2)+**0**=		38
(38*2)+0		76
(76*2)+1		153

1001 1001b = 153

b. 1001 1010 1010b

(0*2)+**1**=		1
(1*2)+**0**=		2
(2*2)+**0**=		4
(4*2)+**1**=		9
(9*2)+**1**=		19
(19*2)+**0**=		38
(38*2)+**1**=		77
(77*2)+**0**=		154
(154*2)+**1**=		309
(309*2)+**0**=		618
(618*2)+**1**=		1237
(1237*2)+**0**=		2474

1001 1010 1010b = 2474

3. Decimal to Hexadecimal

a. 117

$$117/16= \qquad 7 \text{ R5}$$
$$7/16= \qquad 0.45 \text{ R7}$$
$$R7 + R5 = 0x75$$

117 = 0x75

b. 521

$$521/16 \qquad 32 \text{ R9}$$
$$32/16 \qquad 2 \text{ R0}$$
$$2 + R0 + R9 = 0x209$$

521 = 0x209

4. Hexadecimal to Decimal

a. 0x237

7 * 1 =	7
3 * 16 =	48
2 * 256 =	512
	567

0x237 = 567

b. 0xA0E

E(14) * 1 =	14
0 * 16 =	0
A(10) * 256 =	2560
	2574

0xA0E = 2574

5. Binary to Hexadecimal

a. 1001 1001 1010b

1001 =		9
1001=		9
1010=	10 = (A)	
	99A	

1001 1001 1010b = 0x99A

b. 1110 1001 1010 0010b

1110=	14 = (e)	
1001=		9
1010=	10 = (A)	
0010=		2
	2A9E	

1110 1001 1010 0010b = 0x2A9E

6. Hexadecimal to Binary

a. 0x5A7

5*16^2=	1280
A(10)*16=	160
7*1=	7
	1447

0x5A7 = 1447

b. 0xC0D

C(12)*16^2=	3072
0*16=	0
D(13)*1=	13
	3085

0xC0D = 3085