D1.

61_{10} -> 0011 1101 0011 1101

-32_{10} -> 0001 0101 1110 1011

C2.

13_{10} → 00001101

42_{10} → 00101010

```
  1
 0000 1101
 00101010
 --------
 00110111
```

↓

flip 11001000

11001001

011 001 000

↓ ↓ ↓

3 7 1 0

370_8

B20.

$COFFEE_{16}$ to $_{10}$

16^3	16^2	16^1	16^0	16^{-1}	16^{-2}
4096	256	16	1	0.0625	0.00390625
C	O	F	F	E	E

$((C \times 16^3) + (O \times 16^2) + (F \times 16^1) + (F \times 16^0) + (E \times 16^{-1}) + (E \times 16^{-2})$

$(12 \times 16^3) + (0 \times 16^2) + (15 \times 16^1) + (15 \times 16^0) + (14 \times 16^{-1}) + (14 \times 16^{-2})$

$= 49407.92969_{10}$

C1.

$1001\ 0101_2 \rightarrow 6B_{16}$

1001 0100

↓

0110 1011

2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
0	1	1	0	1	0	1	1
128	64	32	16	8	4	2	1

$64 + 32 + 8 + 2 + 1 = 107$

16^n	Num	Count	R	Total
16^1	16	6	11	
16^0	1	11	0	

ANS= 6B

B1.

181336782_{10} —> 16

181336782 ÷ 16 = 11333548.875

1133548 ÷ 16 = 70846.75

70846 ÷ 16 =

16^n	Number	Count	R	Running Total
16^7	268,435,456	0	181336782	181336782
16^6	16,777,216	10	13,564,624	194 901 404
16^5	1,048,576	12	981710	195 883 114
16^4	65,536	14	64206	195 947320
16^3	4096	15	2766	195 950086
16^2	256	10	206	195 950292
16^1	16	12	14	195 950 306
16^0	1	14	6	195 950 306

10	12	14	15	10	12	14
A	C	E	F	A	C	E