Convert 1011011 binary to decimal

(1)

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

$64 + 16 + 8 + 2 + 1 = (91)_{10}$

---

(2) Convert 743 octal to decimal

7	4	3
64	8	1

$7 \times 64 + 4 \times 8 + 3 \times 1 = 448 + 32 + 3 = (483)_{10}$

---

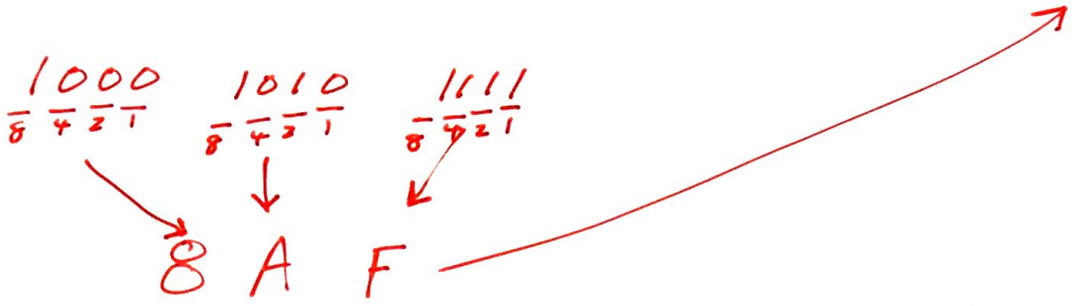
(3) Convert A6F hexadecimal to decimal

A	6	F
256	16	1

$A(10) \times 256 + 6 \times 16 + F(15) \times 1 = 2560 + 96 + 15$

$= (2671)_{10}$

④ Convert 100010101111 binary to hexadecimal



⑤ Convert 172 octal to hexadecimal

A. $(172)_8 \longrightarrow (\underset{4\ 2\ 1}{0\ 0\ 1}\ \ \underset{4\ 2\ 1}{1\ 1\ 1}\ \ \underset{4\ 2\ 1}{0\ 1\ 0})_2$

B. $(0\,0\,1\,1\,1\,1\,0\,1\,0)_2 \longrightarrow (\ 7\ \ A\ )_{16}$

8 4 2 1 8 4 2 1

⑥ Convert 3721 decimal to hexadecimal

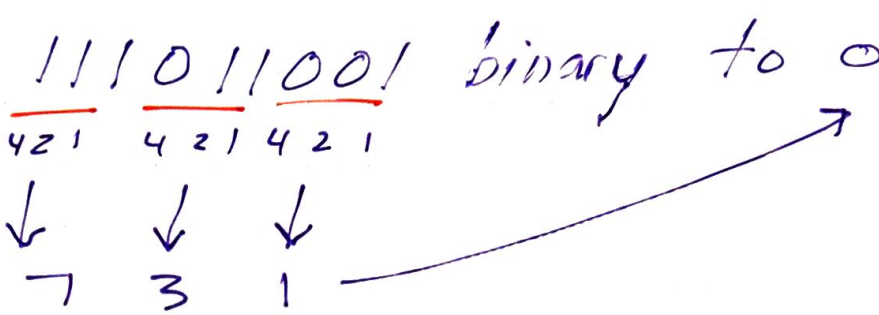
~~4096~~	E	8	9
	256	16	1

$3721 - 3584 = 137$ $\qquad$ $137 - 128 = 9$

$256 \times 14 = 3584 \rightarrow$ E, 256's $\qquad$ $16 \times 8 = 128 \rightarrow$ 8, 16's

$256 \times 15 = 3840$ (too big) $\qquad$ $16 \times 9 = 144$ (too big)

⑦ Convert 111011001 binary to octal



⑧ Convert 955 decimal to octal

$\frac{1}{512}\ \frac{6}{64}\ \frac{7}{8}\ \frac{3}{1}$

955 − 512 = 443

443 − 384 = 59

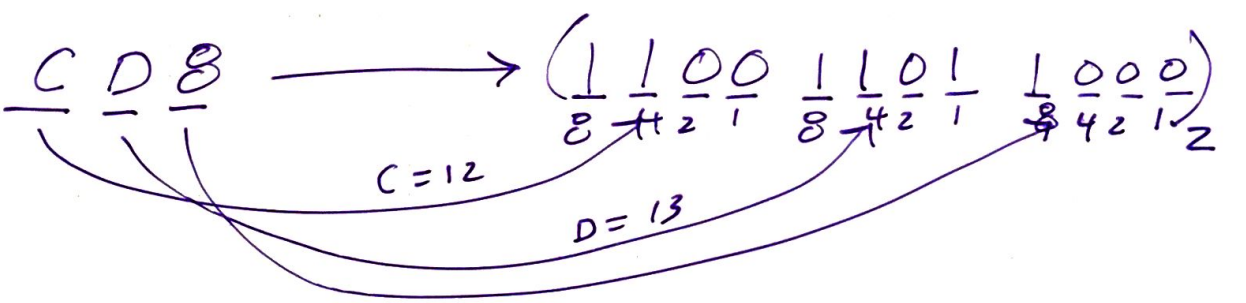
59 − 56 = 3

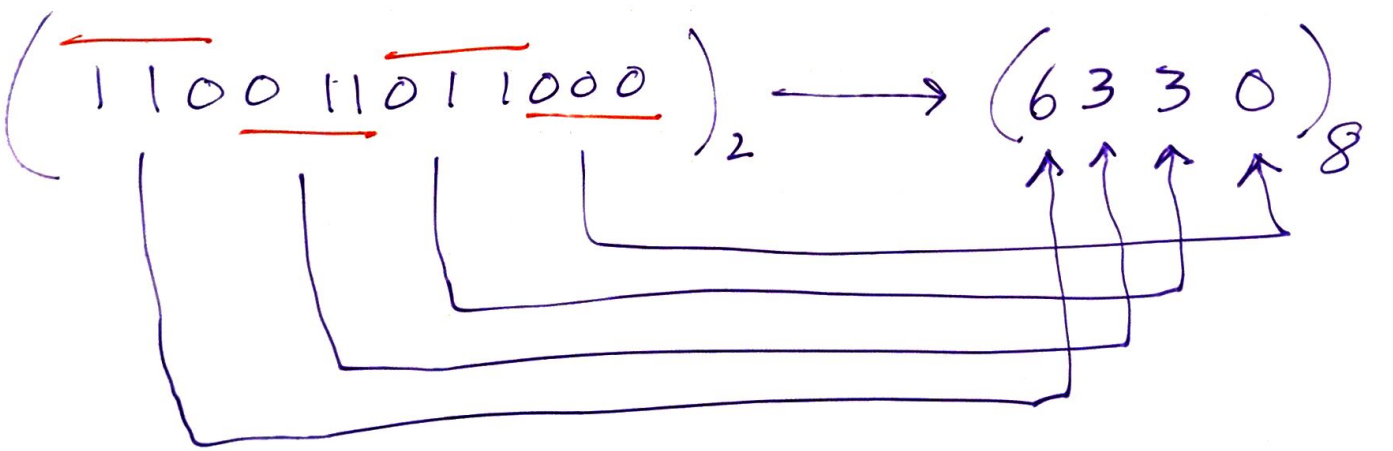
6 × 64 = 384

7 × 8 = 56

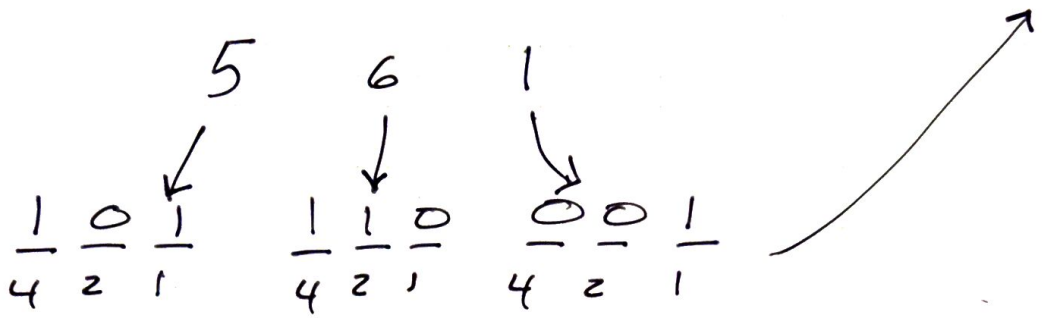
⑨ Convert CD8 hexadecimal to octal

A.

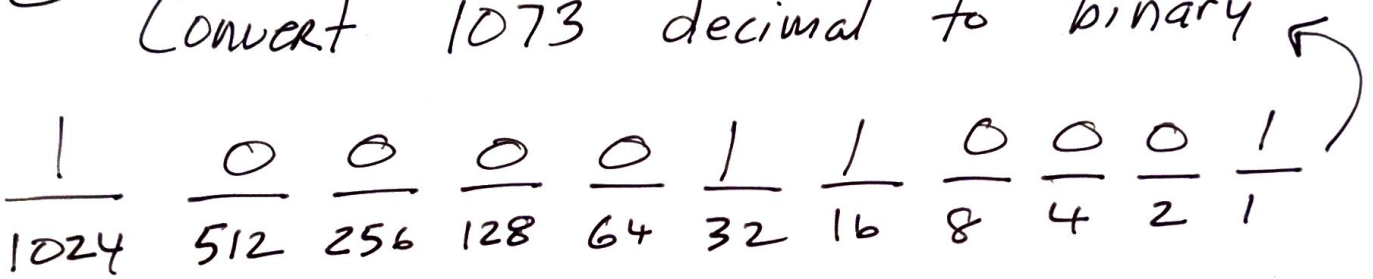




(10) Convert 561 octal to binary



(11) Convert 1073 decimal to binary



1073	49	17	1
−1024	−32	−16	−1
49	17	1	0

(12) Convert E4C hexadecimal to binary