Ejercicios conversión - A01423940, Daniel De Luna.

A.

1.

1101010000101

6789	53	D
3394	26	
1697	13	
840	6	
424	3	
212	1	
106		

1101|0101|0000|0101

15205

2.

1010101100111011000010

56234490	87867	1372	10
2811745	43933	686	5
1405872	21966	343	2
702936	10983	171	1
351468	5491	85	D

175 734 | 2745 | 42 | 21 |

2 5 3 4 7 3 0 2

10|10|011|100|111|011|000|10 ⇝ 25347302

3. 10110111 0|00000 ⇝ 1011011101|00000

2 | 23456	366	5
11728	183	2
5864	91	1
2932	45	0
1466	22	
733	11	

4. 1000|10|111111 ⇝ 1000110111111

2 | 9087	141	2
4543	70	1
2271	35	0

1133
567
283

14
8
4

5. 11121 ⇝ 11121

4 | 345
86
21
5
1
0

6. 0.86510 ⇝

2 | 0
0

⇝ 0.....

.86510 x 2 = 1.73020
.73020 x 2 = 1.46040
.46040 x 2 = 0.92080
.92080 x 2 = 1.84160

.84160 × 2 = 1.68320
.68320 × 2 = 1.36640
.36640 × 2 = 0.73280

etc...

entonces, 0.86510 = 0.1101110....

7.

	111110	
2	126	7
	63	3
	31	1
	15	0

0.675 × 2 = 1.350
0.350 × 2 = 0.700
0.700 × 2 = 1.400
0.400 × 2 = 0.800
0.800 × 2 = 1.600
0.600 × 2 = 1.200
0.200 × 2 = 0.400
0.400 × 2 = 0.800
etc...

resultado: 111110.10101100 ,

B.

1. 3412_5 a base 3

$3 \cdot 5^3 = 375$
$4 \cdot 5^2 = 100$
$1 \cdot 5^1 = 5$
$2 \cdot 5^0 = 2$

482

$122212 \longrightarrow 122212_3$

3 | 482
160
53
17
5
1
1 ...

2. 12221_3 a base 7

$1 \cdot 3^4 = 81$
$2 \cdot 3^3 = 54$
$2 \cdot 3^2 = 18$
$2 \cdot 3^1 = 6$
$1 \cdot 3^0 = 1$

160

$316 \longrightarrow 316_7$

7 | 160
22
3
0

3. 6533_7 a base 9

$3\ 2\ 1\ 0$

$6 \cdot 7^3 = 2058$
$5 \cdot 7^2 = 245$
$3 \cdot 7^1 = 21$
$3 \cdot 7^0 = 3$

2327

$3165 \rightarrow 3165_9$

$9 \mid 2327$
258
28
3
0

C.

1. $100110101011110110 = 465372_8$ y 158454_{10}

$17\ 16\ 15\ 14\ 13\ 12\ 11\ 10\ 9\ 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1\ 0$

$1 \cdot 2^{17} = 131072$
$1 \cdot 2^{14} = 16384$
$1 \cdot 2^{13} = 8192$
$1 \cdot 2^{11} = 2048$
$1 \cdot 2^{9} = 512$
$1 \cdot 2^{7} = 128$
$1 \cdot 2^{6} = 64$

158454_{10}

465372

$1 \cdot 2^6 = 64$
$1 \cdot 2^5 = 32$
$1 \cdot 2^4 = 16$
$1 \cdot 2^2 = 4$
$1 \cdot 2^1 = 2$

8 | 1584454
19807
2475
309
38
4
0

2. $1|3|3|4|2|2|6_8 = 5B896_{16}$ //

1 = 001
3 = 011
3 = 011
4 = 100
2 = 010
2 = 010
6 = 110

0 | 5 | B | 8 | 9 | 6
0|0|1|0|1|1|0|1|1|0|0|0|1|0|0|1|0|1|1|0 //

3. $A12FFD69_{16} = 24113776551_8$

A = 1010
1 = 0001
2 = 0010
F = 1111
F = 1111
D = 1101
6 = 0110
9 = 1001

2 4 1 1 3 7 7 6 5 5 1
10|100|001|001|011|111|111|110|101|001

4

1 1 1 1 1 1
1|01|01|01|01|01 = 111111_4

2 5 2 5
10|101|010|101 = 2525_8

5 5 5
101|101|010|101 = 555_{16}