

EXAU ESTEBAN LOPEZ

PRACTICA 6

### 1. Convertir 1110111 de base 2 a base 5

$1110111_2$  A  $X_{10}$

$$(1*2^0) + (1*2^1) + (1*2^2) + (0*2^3) + (1*2^4) + (1*2^5) + (1*2^6) = 1+2+4+0+16+32+64=119_{10}$$

$119_{10}$  A  $X_5$

$119_{10}$	$X_5$
23	4
4	3
0	4

$434_5$

$$(4*5^0) + (3*5^1) + (4*5^2) = 119_{10}$$

**R.  $1110111_2 = 119_{10} = 434_5$**

### 2. Convertir 120 en base 3 a base 9

$120_3$  A  $X_{10}$

$$(0*3^0) + (2*3^1) + (1*3^2) = 0+6+9 = 15_{10}$$

$15_{10}$  A  $X_9$

$15_{10}$	$X_9$
1	6
0	1

$16_9$

$$(6*9^0) + (1*9^1) = 6+9 = 15_{10}$$

**R.  $120_3 = 15_{10} = 16_9$**

### 3. Convertir AABB de base 12 a base 2

$AABB_{12}$  A  $X_{10}$

$$(11*12^0) + (11*12^1) + (10*12^2) + (10*12^3) = 18863_{10}$$

$18863_{10}$  A  $X_2$

18863 <sub>10</sub>	X <sub>2</sub>
9431	1
4715	1
2357	1
1178	1
589	0
294	1
147	0
73	1
36	1
18	0
9	0
4	1
2	0
1	0
0	1

100100110101111<sub>2</sub>

$$(1 \cdot 2^0) + (1 \cdot 2^1) + (1 \cdot 2^2) + (1 \cdot 2^3) + (0 \cdot 2^4) + (1 \cdot 2^5) + (0 \cdot 2^6) + (1 \cdot 2^7) + (1 \cdot 2^8) + (0 \cdot 2^9) + (0 \cdot 2^{10}) + (1 \cdot 2^{11}) + (0 \cdot 2^{12}) + (0 \cdot 2^{13}) + (1 \cdot 2^{14}) = 431 + 18432 = 18863_{10}$$

**R. AAB<sub>12</sub> = 18863<sub>10</sub> = 100100110101111<sub>2</sub>**

