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Examen 4.1

1.-

decimal	hexadecimal	decimal	hexadecimal	decimal	hexadecimal	decimal	hexadecimal
1	1	31	1F	61	3D	91	5B
2	2	32	20	62	3E	92	5C
3	3	33	21	63	3F	93	5D
4	4	34	22	64	40	94	5E
5	5	35	23	65	41	95	5F
6	6	36	24	66	42	96	60
7	7	37	25	67	43	97	61
8	8	38	26	68	44	98	62
9	9	39	27	69	45	99	63
10	0A	40	28	70	46	100	64
11	0B	41	29	71	47		
12	0C	42	2A	72	48		
13	0D	43	2B	73	49		
14	0E	44	2C	74	4A		
15	0F	45	2D	75	4B		
16	10	46	2E	76	4C		
17	11	47	2F	77	4D		
18	12	48	30	78	4E		
19	13	49	31	79	4F		
20	14	50	32	80	50		
21	15	51	33	81	51		
22	16	52	34	82	52		
23	17	53	35	83	53		
24	18	54	36	84	54		
25	19	55	37	85	55		
26	1A	56	38	86	56		
27	1B	57	39	87	57		
28	1C	58	3A	88	58		
29	1D	59	3B	89	59		
30	1E	60	3C	90	5A		

2.- Un bit es la expresión mínima de información, un byte consta de 8 bits y una palabra esta formada por 2 bytes.

3., 4.-

$$1010_2 \rightarrow X_{70}$$

$$X_{10} \rightarrow X_9$$

$${}^{1222}010_2 = 10_{10} \quad 9 \overline{)10} \quad \begin{array}{r} 1 \\ 9 \\ \hline 1 \end{array} \quad \begin{array}{r} 11 \\ \hline \end{array}$$

$$\boxed{010_2 = 10_{10} = 11_9}$$

$$0101_2 \rightarrow X_{10}$$

$$X_{10} \rightarrow X_9$$

$${}^{1222}0101_2 = 5_{10} \quad 9 \overline{)5} \quad \begin{array}{r} 0 \\ 9 \\ \hline 5 \end{array} \quad \begin{array}{r} 05 \\ \hline \end{array}$$

$$\boxed{0101_2 = 5_{10} = 05_9}$$

$$13_{10} \rightarrow X_4 \quad 4 \overline{)13} \quad \begin{array}{r} 3 \\ 4 \\ \hline 1 \end{array} \quad \begin{array}{r} 31 \\ \hline \end{array}$$

$$\boxed{13_{10} = 31_4}$$

$$10_{10} \rightarrow X_4 \quad 4 \overline{)10} \quad \begin{array}{r} 2 \\ 4 \\ \hline 2 \end{array} \quad \begin{array}{r} 22 \\ \hline \end{array}$$

$$\boxed{10_{10} = 22_4}$$

5.-

$$8_9 \rightarrow X_{10}$$

$$X_{10} \rightarrow X_4$$

$$8_9 = 8_{10} \quad \begin{array}{r} 4/8^2 \\ 0 \end{array} \setminus 20_4$$

$$\boxed{8_9 = 8_{10} = 20_4}$$

$$14_9 \rightarrow X_{10}$$

$$X_{10} \rightarrow X_4$$

$$14_9 = 13_{10} \quad \begin{array}{r} 9^1 9^2 \\ 4/13^3 \\ 1 \end{array} \setminus 31_4$$

$$\boxed{14_9 = 13_{10} = 31_4}$$

6.-

H O L A

$$\boxed{\begin{array}{cccc} 72_{10} & 79_{10} & 76_{10} & 61_{10} \\ 48_{16} & 4F_{16} & 4C_{16} & 3D_{16} \end{array}}$$

$$16 \overline{) 72} \begin{array}{r} 4 \\ 08 \end{array} \setminus 48$$

$$16 \overline{) 79} \begin{array}{r} 4 \\ 15 \end{array} \rightarrow F$$

$$16 \overline{) 61} \begin{array}{r} 3 \\ 13 \end{array}$$

$$16 \overline{) 76} \begin{array}{r} 4 \\ 12 \end{array} \rightarrow C$$