UNISALENTO Informatica per Biotecnologie ( ESERCIZI DA SVOLGERE)

**Complemento a 1**

 **zona binaria zona decimale**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|    |  |  |  |  |  |  |  |  |  |  | **+** |
|   |  |  |  |  |  |  |  |  |  |  | **=** |
|   |  |  |  |  |  |  |  |  |  |   |  |

8 bit: 102 + (-76) 112 + (-74) -46 + 101 -54 + (-45)

6 bit: 15+ (-16) 22 + (-11) -9 + 10 -3 + (-29) 101110+111100

8 bit 01010101 + 11001100 01010101 + 11001100 **9C16 + E516** D416 + 7A16

8 bit **1448 + 2128**

 **Complemento a 2**

 **zona binaria zona decimale**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|    |  |  |  |  |  |  |  |  |  |  | **+** |
|   |  |  |  |  |  |  |  |  |  |  | **=** |
|   |  |  |  |  |  |  |  |  |  |   |  |

8 bit: 101 + (-75) 102 + (-76) -46 + 101 -54 + (-45)

6 bit: 15+ (-16) 22 + 11) -9 + 10 -3 + (-29) 101110+111100

8 bit 01010101 + 11001100 01010101 + 11001100 **9C16 + E516** D416 + 7A16

8 bit (AC)16+(E3)16 in C2

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Calcolare il valoredella base intera x per la quale vale la seguente uguaglianza:

(2001)b = (37)16

(131)b = (65)11

Espressioni Booleane Semplificare e produrre la tabella di verità

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Dimostrare la seguente uguaglianza:

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 Data la seguente tabella di verità :

|  |  |  |  |
| --- | --- | --- | --- |
| x | y | z | F(x,y,z) |
|  0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 |

 Ricavare l’espressione booleana corrispondente

 tramite la somma dei minterm (oppure il prodotto

 dei Maxterm )

**(Standard IEEE 754) Floating Point (hidden bit) X = -1S \* 2E-M \* 1.F**

32 bit, singola precisione.

Trovare il valore decimale corrispondente:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| C | 3 | 8 | 0 | 0 | 2 | 0 | 0 |

 M = 128

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| B | 0 | A | 4 | 0 | 0 | 0 | 0 |

M = 127

Trasformare in Floating Point (singola precisione) e nel corrispondente esadecimale:

-176,125 M =128

1,34375 M = 127

-1,03125 M = 128