***Ejercicio Nº 1:***

|  |  |
| --- | --- |
| B = (((D+C)2)+(A\_(D+C))\_  (D +C)), |  |

***Ejercicio Nº 2:***

|  |  |
| --- | --- |
| X = (0 01111101 0000000111) (2^-2)  Y = (0 01111010 0000001001) (2^-5)  Shift y 2 lugares: 0.0010000001001  ***Multiplico***  x 1. 0000000111  y 0.0010000001001 .  0,0100000100001000111111  GR S = 1 = (0|0|0|1|1|1|1|1|1)  Normalizamos: 1,0000010000|0  G R; S=1  Redondeo hacia los pares: 1,0000010000 x 2^-4  Resultado final = 0 01111011 0000010000  En decimal: 0,063476563  Error = 0,00793503969907761 - 0,063476563 = 0,05554152330092239 |  |

***Ejercicio Nº 3:***

|  |  |
| --- | --- |
| X = (0 01111100 0010000000) (2^-3)  Y = (0 01111001 0000110011) (2^-6)  Shift y 3 lugares: 0.0010000110011 x 2^-3  ***Sumo***  x 1. 0010000000  y 0.0010000110011.  1.0100000110011  GR S = 1  Está normalizado.  Redondeo +infi: R ^S = 1. Tenemos que sumar 1.  Resultado = 1.0100000111 x 2^-3 = 0,157104492  Resultado final = 0 01111100 0100000111  En decimal: 0,157104492  Error = 0,157028198242187- 0,157104492= -0,000076293757813 |  |

***Ejercicio Nº 4:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| (1) mov R6, #xxxx  (2) mov R6, R  (3) mov R6, (R)  (4) mov R6, xxxx  (5) mov R6, (xxxx)  (6) mov R6, (R2)xxxx  (7) mov R6, @300(R) | #xxxx Inmediato  R Registro  (R) Registro indirecto  xxxx Absoluto  (xxxx) Memoria indirecto  (R)xxxx Base  @xxxx(R) Pre-indexado indirecto | ***Paso*** | ***Valor*** | ***Accesos*** |
| ***1*** | ***xxxx = 100*** | ***0*** |
| ***2*** | ***R = R1*** | ***0*** |
| ***3*** | ***R = R4*** | ***1*** |
| ***4*** | ***xxxx = 400*** | ***1*** |
| ***5*** | ***xxxx = 200*** | ***2*** |
| ***6*** | ***xxxx = 200*** | ***1*** |
| ***7*** | ***R = R3*** | ***2*** |

***Ejercicio Nº 5:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Programa*** | ***Inciso A: Ensamblado*** | |  | | | | | | |
| Programa A:  LDA R0, FFh  LOAD R1, 0(R0)  ADD R2, RF, RF  JZ R1, lbl2  lbl1: ADD R2, R2, R1  DEC R1  JG R1, lbl1  lbl2: STORE R2, 0(R0)  HLT  Pseudocódigo 1  if (R1 <= 4) R2++;  else R2--;  Pseudocódigo 2  R3 = 0;  for (R4 = 0; R4 < 10; R4++)  R3 += R4; | 00:  02:  04:  06:  08:  0A:  0C: 0E:  10: | 80FF  6100  02FF  9106  0221  E1XX  A1F7  7020  FXXX |  | | | | | | |
| ***Inciso B:*** | | | | | | |
| ***R0*** | ***R1*** | ***R2*** | ***PC*** |  |  |  |
| -- | -- | -- | **00** |  |  |  |
| **FF** | -- | -- | **02** |  |  |  |
| FF | **03** | -- | **04** |  |  |  |
| FF | 03 | **00** | **06** |  |  |  |
| FF | 03 | 00 | **08** |  |  |  |
| FF | 03 | **03** | **0A** |  |  |  |
| FF | **02** | 03 | **0C** |  |  |  |
| FF | 02 | 03 | **0E-08** |  |  |  |
| FF | 02 | **05** | **0A** |  |  |  |
| FF | **01** | 05 | **0C** |  |  |  |
| FF | 01 | 05 | **0E-08** |  |  |  |
| FF | 01 | **06** | **0A** |  |  |  |
| FF | **00** | 06 | **0C** |  |  |  |
| FF | 00 | 06 | **0E** |  |  |  |
| FF | 00 | 06 | **10** |  |  |  |
| FF | 00 | 06 | **--** |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | | | | | | |
| ***Inciso C:*** | | | | | | |
| LDA R4, 04 ; R4 = 4  SUB R3, R1, R4 ; R3 = R1 – R4  JG R3, false ; si (R1-4)>0 🡪 R1>4  INC R2  JMP fin  false: DEC R2  fin: HLT | | | | | | |
| ***Inciso D:*** | | | | | | |
| XOR R3, R3, R3 ; R3=0  LDA R4, 09 ; R4 = 09  loop: ADD R3, R3, R4 ; R3+=R4  DEC R4 ; R4--;  JG R4, loop ; Loop mientras R4>0  HLT | | | | | | |