1. Converta os seguintes números de binário para decimal:

a) (101.01)(2) - **5,25**

b) (11001.0011)(2) - **25,1875**

c) (01011.0101)(2) - **11,3125**

d) (1.0001)(2) - **1,0625**

e) (101001,101)(2) - **41,625**

1. Converta os seguintes números de octal para decimal:

a) 234.5(8) - 128+24+4 = **156,0625** = 5\*8^-1

b) 12.3(8) - 1\*8^1+2\*8^0=**10,375** = 3\*8^-1

c) 7767.07(8) - 7\*8^3+7\*8^2+6\*8^1+7\*8^0 = **4087,0,109375** = 7\*8^-2

d) 123.45(8) - 1\*8^2+2\*8^1+3\*8^0 = **83,578125** = 4\*8^-1+ 5\*8^-2

e) 72.72(8) - 7\*8^1+2\*8^0 = **58,90625** = 7\*8^-1+2\*8^-2

1. Converta os seguintes números de hexadecimal para decimal:

a) A3.3(16) - 10\*16^1+3\*16^0 = **163,1875** = 3\*16^-1

b) 129.C(16) - 1\*16^2+2\*16^1+9 = **297,75** =12\*16^-1

c) AC.DC(16) - 10\*16^1+12 = **172,859375** = 13\*16^-1+12\*16^-2

d) FAB.3(16) - 15\*16^2+10\*16^1+11 = **4011,1875** = 3\*16^-1

e) BB8.0D(16) - 11\*16^2+11\*16^1+8 =**3000,05078125** = 13\*16^-2

f) EF(16) - 14\*16^1+15 = **239**

1. Converta os seguintes números de decimal para binário, octal e hexadecimal:
2. 625(10) -

B - 625/2 = 312/2 = 156/2 = 78/2 = 39/2 = 19/2 = 9/2 = 4/2 = 2/2 = 1/2|= **1001111001**

O - 625/8 = 78/8 = 9/8 = 1/8|= **1161**

Hex - 625/16 = 39/16 = 2/16 |= **271**

1. 0.00390625(10)

B - 0.00390625\*2 = 0,0078125\*2 = 0,015625\*2 = 0,03125\*2 = 0,0625\*2 = 0,125\*2 = 0,25\*2 = 0,5\*2 = 1 |= **0,00000001**

O - 0.00390625\*8 = 0,03125\*8 = 0,25\*8 = 2 |= **0,002**

Hex - 0.00390625\*16 = 0,0625\*16 = 1 |= **0,01**

1. 0.62890625(10)

B - 0,62890625\*2 = 0,2578125\*2 = 0,515625\*2 = 0,03125\*2 = 0,0625\*2 = 0,125\*2 = 0,25\*2 = 0,5\*2 = 1 |= **0,10100001**

O - 0.62890625\*8 = 0,03125\*8 = 0,25\*8 = 2 |= **0,502**

Hex - 0.62890625\*16 = 0,0625\*16 = 1 |= **0,A1**

1. 0.75(10)

B - 0.75\*2 = 0,5\*2 = 1|= **0,11**

O - 0.75\*8 = 6 |= **0,6**

Hex - 0.75\*16 = 12 |= **0,12**

1. 0.9375(10)

B - 0.9375\*2 = 0,875\*2 = 0,75\*2 = 0,5\*2 = 1 |= **0,1111**

O - 0.9375\*8 = 0,5\*8 = 4|= **0,7**

Hex - 0.9375\*16 = 15|= **0,15** = **0,F**

1. (123,662)(10)

B - 123/2 = 61/2 = 30/2 = 15/2 = 7/2 = 3/2 = 1/2 = 0,5 |= **1111011,10101000101111000** =|0,662\*2 = 0,324\*2 = 0,648\*2 = 0,296\*2 = 0,592\*2 = 0,184\*2 = 0,368\*2 = 0,736\*2 = 0,472\*2 = 0,944\*2 = 0,888\*2 = 0,776\*2 = 0,552\*2 = 0,104\*2 = 0,208\*2 = 0,416\*2 = 0,832\*2 = 0,664\*2

O - 132/8 = 15/8 = 1/8 = 0,125 |= **173,5227432** =| 0,662\*8 = 0,296\*8 = 0,368\*8 = 0,944\*8 = 0,552\*8 = 0,416\*8 = 0,328\*8

Hex - 123/16 = 7/16 = 0,4375 |= **A7,A977** =|0,662\*16 = 0,592\*16 = 0,472\*16 = 0,552\*16

1. Converta 1001010011010,11101011 para as bases hexadecimal e octal.

Hex - 0001 = 1 || 0010 = 2 || 1001 = 9 || 1010 = A |= **129A,EB** =| 1110 = E || 1011 = B

O - 001 = 1|| 001 = 1|| 010 = 2 || 011 = 3 || 010 = 2|= **11232,726**=| 011 = 7 || 101 = 2 || 011 = 6

1. Converta (ABC1,FE8)(16) para as bases octal e binária.

B - A = 1010 || B = 1011 || C = 1100 || 1 = 0001|= **1010101111000001,111111101000** =| F = 1111 || E = 1110 || 8 = 1000

O - 001 = 1 || 010 = 2 || 101 = 5 || 111 = 7 || 000 = 0 || 001 = 1 |= **125701,775** =| 111 = 7 || 111 = 7 || 101 = 5 || 000 = 0

1. Converta (A2,5)(16) para binário e octal.

B - A = 1010 || 2 = 0010 |= **10100010,0101** =| 5 = 0101

O - 010 = 2 || 100 = 4 || 010 = 2 |= **242,24** =| 010 = 2 || 100 = 4

1. Converta (72)(8) para binário e hexadecimal.

B - 7 = 111 || 2 = 010 |= **111010**

Hex - 0011 = 3 || 1010 = 10 |= **3A**

1. Converta (101)(3) para a base 4.

D - 1\*3^0 + 1\*3^0 |= **10**

Base 4 - 10/4 = 2/4 |= **22**