

Ejercicio 7:

Expresar los siguientes números decimales en su representación binaria (negativos en complemento a 2) considerando los tamaños de los registros donde serán alojados según la tabla.

| Decimal | Binario | | |
|---------|----------|------------------|-------------------------------------|
| | Byte | HalfWord | Word |
| 113 | 01110001 | 0000000001110001 | 00000000000000000000000001110001 |
| -63 | 11000001 | 1111111111000001 | 11111111111111111111111111000001 |
| 319 | No entra | 0000000100111111 | 000000000000000000000000100111111 |
| -128 | 10000000 | 1111111110000000 | 11111111111111111111111110000000 |
| 65535 | No entra | 1111111111111111 | 00000000000000000111111111111111 |
| -149744 | No entra | No entra | 11111111111011011011011011100010000 |

113 = 2.56 + 1

56 = 2.28 + 0

28 = 2.14 + 0

14 = 2.7 + 0

7 = 2.3 + 1

3 = 2.1 + 1

1 = 2.0 + 1

63 = 2.31 + 1

31 = 2.15 + 1

15 = 2.7 + 1

7 = 2.3 + 1

3 = 2.1 + 1

1 = 2.0 + 1

63 = 00111111

Niego: 11000000

Sumo 1: + 1

-63 = 11000001

319 = 2.159 + 1

159 = 2.79 + 1

79 = 2.39 + 1

39 = 2.19 + 1

19 = 2.9 + 1

9 = 2.4 + 1

4 = 2.2 + 0

2 = 2.1 + 0

1 = 2.0 + 1

128 = 10000000

Niego: 01111111

Sumo 1: + 1

-128 = 10000000

65535 = 2.32767 + 1

32767 = 2.16383 + 1

16383 = 2.8191 + 1

8191 = 2.4095 + 1

4095 = 2.2047 + 1

2047 = 2.1023 + 1

1023 = 2.511 + 1

511 = 2.127 + 1

127 = 2.63 + 1

63 = 2.31 + 1

31 = 2.15 + 1

15 = 2.7 + 1

7 = 2.3 + 1

3 = 2.1 + 1

1 = 2.0 + 1

149744 = 2.74872 + 0

74872 = 2.37436 + 0

37436 = 2.18718 + 0

18718 = 2.9559 + 0

9559 = 2.4679 + 1

4679 = 2.2339 + 1

2339 = 2.1169 + 1

1169 = 2.584 + 1

584 = 2.292 + 0

292 = 2.146 + 0

146 = 2.73 + 0

73 = 2.36 + 1

36 = 2.18 + 0

18 = 2.9 + 0

9 = 2.4 + 1

4 = 2.2 + 0

2 = 2.1 + 0

1 = 2.0 + 1

149744 = 0100100100011110000

Niego: 1011011011100001111

Sumo 1: + 1

-149744 = 10110110110001111