Denis Doci

Doci2

HW 10

Conversions/Formulas used

Formula A:

(-1)^SIGNBIT \* 1.Mantissa \* 2^Biased

Biased Exp = exp – 31

Formula B:

Exponent = bias + biasedexp

(-1)^SIGNBIT \* 1.Mantissa \* 2^BiasedExp

|  |  |  |  |
| --- | --- | --- | --- |
| Format A |  | Format B |  |
| Bits | Value | Bits | Value |
| 0 100001 110100000 | 29/4 | 0 10001 1101000000 | 29/4 |
| 1 100110 011100100 | -185 | 1 10110 0111001000 | -185 |
| 0 100111 100000000 | 384 | 0 10111 1000000000 | 384 |
| 0 100001 000100000 | 17/4 | 0 10001 0001000000 | 17/4 |
| 1 100000 111100000 | -31/8 | 1 10000 1111000000 | -31/8 |
| 0 100101 001011100 | 151/2 | 0 10101 0010111000 | 151/2 |
| 1 010101 110000000 | -7/4096 | 1 00101 1100000000 | -7/4096 |
| 0 100111 000001010 | 261 | 0 10111 0000010100 | 261 |
| 0 100101 100100011 | 803/8 | 0 10101 1001000110 | 803/8 |
| 0 111111 000000010 | NaN | 0 11111 0000000100 | NaN |