**Floating point**

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**Floating 🡪 hexadecimal representation**

My magic floating point number: 2.4609375

1. Sign: positive, therefore 0
2. Exponent: 21, therefore 1

1 + 127 = 128

128 in binary: 1000 0000

1. Mantissa
   1. 2.4609375 can be written as fraction:
   2. Subtracting increasing powers of 1/2
      1. Cannot subtract 1/2 🡪 0
      2. Cannot subtract 1/4 🡪 0
      3. Can subtract 1/8 🡪 1
      4. Can subtract 1/16 🡪 1
      5. Can subtract 1/32 🡪1
      6. Cannot subtract 1/64 🡪 0
      7. Can subtract 1/128 🡪 1
      8. Can subtract 1/256 🡪 1
         1. 0
   3. Mantissa: 0011 1011
2. Final binary: 0100 0000 0001 1101 1000 0000 0000 0000
3. Hexadecimal representation: 0x00801d40 (little Endian)

**Hexadecimal 🡪 floating number**

My hexadecimal representation is: 0x00401fc1

Big endian: 0xc11f4000

Binary: 1100 0001 0001 1111 0100 0000 0000 0000

* Sign: 1
* Exponent: 1000 0010
* Mantissa: 001 1111 0100 0000 0000 0000
* -9.95312