Encoding 2 page 3

— binary scientific 1.001×2^{-96} $s = 0$, $-96 = e - 127$,
f (w/ 20 zeroes) $e = 31 = 1F$ hex

hex 0 0001 1111 001 0000 0000 0000 0000 0000
= 0 F 9 0 00 00 → OF 90 00 00

— hex 3E C0 00 00 → binary 0011 1110 1100 0000 0000 0000 0000 0000
$s = 0$ regroup 0 0111 1101 100 0000 0000 0000 0000 0000
$e = 7D = 125$ (e: 0111 1101, f: 100 0000 0000 0000 0000 0000)
hex decimal
binary scientific = $1.1 \times 2^{125-127} = 1.1 \times 2^{-2}$
decimal = 1,1 = ,011 = $\frac{1}{4} + \frac{1}{8} = 0.375$

— decimal 604.375 → double 1208.75, 2417.5, 4835 → 3 times
$= 4835 \times 2^{-3}$
↳ convert to binary:

1 → 2417	0 → 151	0 → 9
1 → 1208	1 → 75	1 → 4
0 → 604	1 → 37	0 → 2
0 → 302	1 → 18	0 → 1

= 1 0010 1110 0011 ← 12 times

$= 1.0010\,1110\,0011 \times 2^{-3} \times 2^{12} = 1.0010\,1110\,0011 \times 2^{9}$
(f)
$(9 = e - 127,\ e = 136)$
= 88 hex

s e
hex = 0 1000 1000 001 0111 0001 1000 0000 0000
= 0100 0100 0001 0111 0001 1000 0000 0000
= 4 4 1 7 1 8 0 0
= 44 17 18 00