

Q 1.1.4) $1.351562_{10} \rightarrow ?_{16}$

$$1.0_{10} = 1.0_{16}$$

$$0.3515625 \times 16 = 5.625 = 5_{16}$$

$$0.625 \times 16 = 10.0 = A_{16}$$

$$0.0 \times 16 = 0.0 = 0_{16}$$

Answer:

1.5A

Q 1.1.5) $1001101_2 \rightarrow ?_{10}$

6	5	4	3	2	1	0
1	0	0	1	1	0	1
64	32	16	8	4	2	1

$$1 + 4 + 8 + 64 = 77$$

$$1 \times 2^0 + 1 \times 2^2 + 1 \times 2^3 + 1 \times 2^6 = 77$$

Answer:

77

Q 1.1.6) $1001101_2 \rightarrow ?_{16}$

0	1	0	0	1	1	0	1
	4			8	4		1

$$4_{16} + 13_{16} = 4D$$

Answer:

4D

Q 1.1.7) $0.101011_2 \rightarrow ?_{10}$

1	0	1	0	1	1
2 ⁻¹	2 ⁻²	2 ⁻³	2 ⁻⁴	2 ⁻⁵	2 ⁻⁶

$$= 1 \times 2^{-1} + 1 \times 2^{-3} + 1 \times 2^{-5} + 1 \times 2^{-6}$$

$$= 0.5 + 0.125 + 0.03125 + 0.015625$$

$$= 0.671875_{10}$$

Answer:

0.671875

Q 1.1.8) $0.101011_2 \rightarrow ?_{16}$

0	1	0	1	0	1	1	0	0
	8		2		8	4		

$$0.10_{16} + 12_{16} = 0.AC$$

Answer:

0.AC

Q 1.1.9) $F0DD_{16} = ?_2$

F	0	0	D
15 ₁₆	0 ₁₆	0 ₁₆	13 ₁₆
1111	0000	0000	1101

Answer:

1111 0000 0000 1101