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A1

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Q.1.1.10) $F00D_{16} = ?_{10}$

$$\begin{array}{ccccccc} 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 1 \\ \downarrow \downarrow \downarrow \downarrow & & & & \downarrow \downarrow & \downarrow & & & & & & & & & & \\ 15 & 14 & 13 & 12 & 3 & 2 & 1 & 0 & & & & & & & & \end{array}$$

$$= 1 \times 2^0 + 1 \times 2^2 + 1 \times 2^3 + 1 \times 2^{12} + 1 \times 2^{13} + 1 \times 2^{14} + 1 \times 2^{15}$$

$$= 1 + 4 + 8 + 4096 + 8192 + 16384 + 32768$$

$$= 61453$$

Answer: 61453

Q.1.1.11) $A.BED_{16} = ?_2$

A	.	B	E	D
10_{16}		11_{16}	14_{16}	13_{16}
1010		1011	1110	1101

Answer:

1010.101111101101

Q.1.1.12) $A.BED_{16} \rightarrow ?_{10}$

$$\begin{array}{cccccccccccc} & 3 & 2 & 1 & 0 & & -1 & -2 & -3 & -4 & -5 & -6 & -7 & & -9 & -10 & -12 \\ A.BED = & 1 & 0 & 1 & 0 & . & 1 & 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 & 0 & 1 \\ = & 1 \times 2^3 & + & 1 \times 2^2 & + & 1 \times 2^1 & + & 1 \times 2^0 & + & 1 \times 2^{-1} & + & 1 \times 2^{-2} & + & 1 \times 2^{-3} & + & 1 \times 2^{-4} & + & 1 \times 2^{-5} & + & 1 \times 2^{-6} & + & 1 \times 2^{-7} & + & 1 \times 2^{-9} & + & 1 \times 2^{-10} & + & 1 \times 2^{-12} \\ = & 8 & + & 4 & + & 2 & + & 1 & + & 0.5 & + & 0.25 & + & 0.125 & + & 0.0625 & + & 0.03125 & + & 0.015625 & + & 0.0078125 & + & 0.00390625 & + & 0.001953125 & + & 0.0009765625 & + & 0.00048828125 \\ = & 10.7453613281 \end{array}$$

Answer: 10.7453613281