

Introduction to Binary Representation of Numbers



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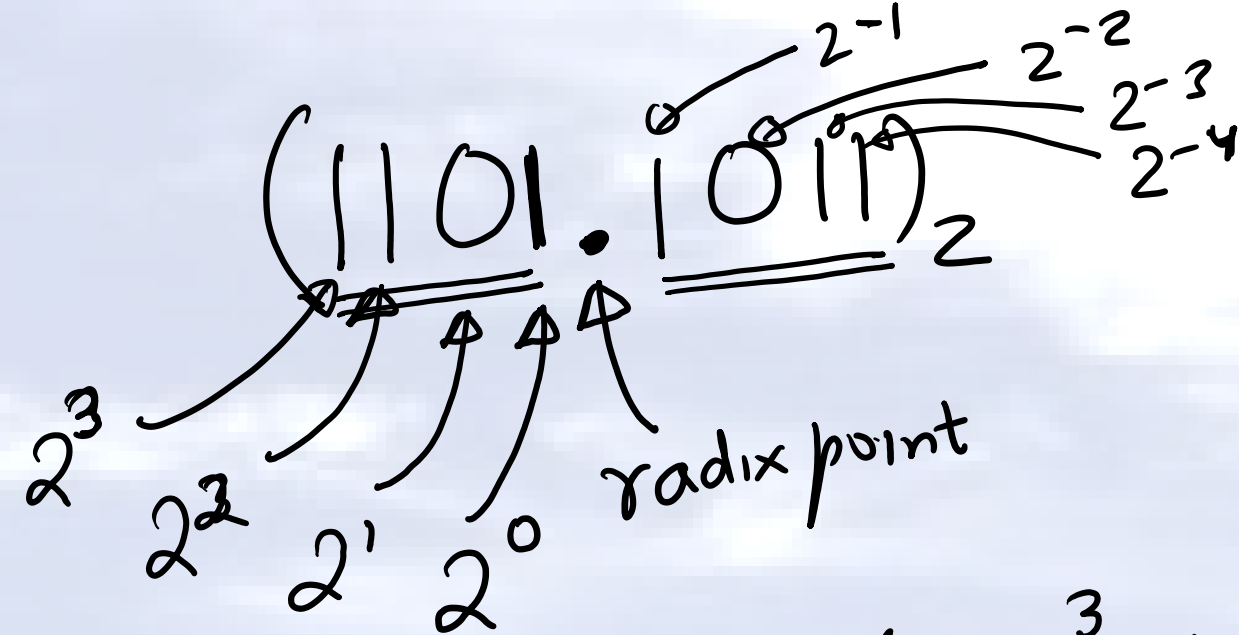
$$\begin{array}{cccccc}
 2 & 6 & 7 & . & 3 & 5 \\
 \uparrow & \uparrow & \uparrow & & \uparrow & \uparrow \\
 10^2 & 10^1 & 10^0 & & 10^{-1} & 10^{-2}
 \end{array}$$

$$(267.\underline{\underline{35}}) = (2 * 10^2 + 6 * 10^1 + 7 * 10^0 + 3 * 10^{-1} + 5 * 10^{-2})$$

$$= (200 + 60 + 7) + (0.3 + 0.05)$$

$$= 267.35$$





$$(1101.1011)_2 = (1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 + 1 \times 2^{-1} + 0 \times 2^{-2} + 1 \times 2^{-3} + 1 \times 2^{-4})$$

$$= (8 + 4 + 0 + 1) + (0.5 + 0 + 0.125 + 0.0625)$$

$$= (13.6875)_{10}$$

END



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