

Krystal Binary, Dec, Hex Conversion Work

Wednesday, April 15, 2020 11:23 AM

Binary to decimal

#3) 10000011

$$= 1 \cdot 2^0 + 1 \cdot 2^1 + 1 \cdot 2^7 = 2 + 128 = 130$$

Decimal to binary

#1) 213 \rightarrow 11010101

$$213 / 2 = 106 \text{ R } 1$$

$$106 / 2 = 53 \text{ R } 0$$

$$53 / 2 = 26 \text{ R } 1$$

$$26 / 2 = 13 \text{ R } 0$$

$$13 / 2 = 6 \text{ R } 1$$

$$6 / 2 = 3 \text{ R } 0$$

$$3 / 2 = 1 \text{ R } 1$$

$$1 / 2 = 0 \text{ R } 1$$

Binary to hex

#1) 1100 1100

$$1100 = C \text{ (in hex)}$$

$$= CC$$

1100 1100

Hex to Binary

#1) $0x45 = 01000101$

$4 \rightarrow 0100$ (in binary)

$5 \rightarrow 0101$ (in binary)

Dec to Hex

#1) $233 \rightarrow 149$

$233/16 = 14 R 9$

$14/16 = 0 R 14$

Hex to Decimal

#1) $0x5A$

$10 \times 16^0 = 10$
 $5 \times 16^1 = 80$

90