

CVK Abhiroop

1a)

$$10011011_2 = 1 + 2 + 8 + 16 + 128 = 155$$

b)

$$1101101_2 = 1 + 4 + 8 + 32 + 64 = 109$$

c)

$$3A8_{16} = 11\ 1010\ 1000_2 = 8 + 32 + 128 + 256 + 512 = 936$$

d)

$$2214_5 = 4 + 5 + 50 + 250 = 309$$

2a)

$$69_{10}$$

$$69/2 = 34\ R\ 1$$

$$34/2 = 17\ R\ 0$$

$$17/2 = 8\ R\ 1$$

$$8/2 = 4\ R\ 0$$

$$4/2 = 2\ R\ 0$$

$$2/2 = 1\ R\ 0$$

$$\frac{1}{2} = 0\ R\ 1$$

Therefore, 1000101_2

b)

$$485_{10}$$

$$485/2 = 242\ R\ 1$$

$$242/2 = 121\ R\ 0$$

$$121/2 = 60\ R\ 1$$

$$60/2 = 30\ R\ 0$$

$$30/2 = 15\ R\ 0$$

$$15/2 = 7\ R\ 1$$

$$7/2 = 3\ R\ 1$$

$$3/2 = 1\ R\ 1$$

CVK Abhiroop

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

Therefore, 11100101_2

c)

$6D1A_{16} = 0110 \ 1101 \ 0001 \ 1010_2$