

# Tarea 2

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7:10 AM

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TAREA 2

Materia: Diseño Digital Moderno

## 1] Hacer conversiones rápidas bin $\rightarrow$ octal $\rightarrow$ hex

a)  $101010_2 \rightarrow x_8 \rightarrow x_{16}$

Base 8  
(Agrupaciones de 3)

$$\underbrace{101}_5 \quad \underbrace{010}_2$$

$\therefore 52_8$

Base 16  
(Agrupaciones de 4)

$$\underbrace{0010}_2 \quad \underbrace{1010}_A$$

$\therefore 2A_{16}$

b)  $1101111_2 \rightarrow x_8 \rightarrow x_{16}$

Base 8

$$\underbrace{001}_1 \quad \underbrace{101}_5 \quad \underbrace{111}_7$$

$\therefore 157_8$

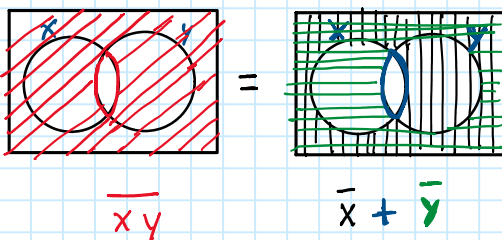
Base 16

$$\underbrace{0110}_6 \quad \underbrace{1111}_F$$

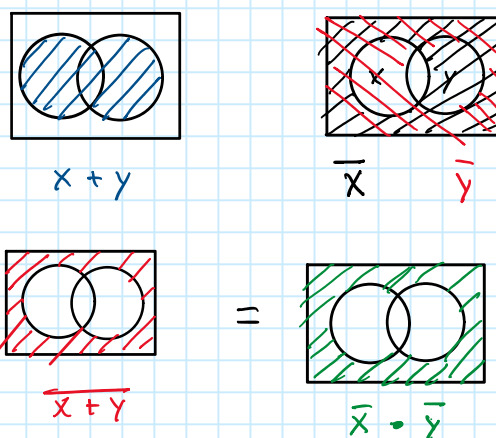
$\therefore 6F_{16}$

## 2] Verificar Leyes de Morgan con diagramas de Venn

a)  $\overline{xy} = \bar{x} + \bar{y}$

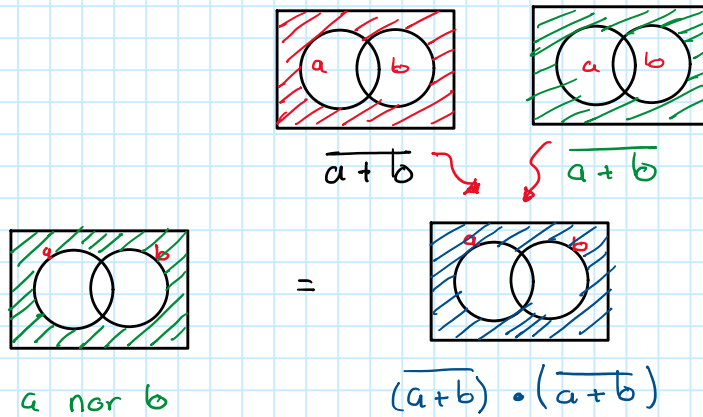


b)  $\overline{x+y} = \bar{x} \cdot \bar{y}$



### 3] Verificar con Diagramas de Veen

a)  $a \text{ nor } b = (\overline{a+b})(\overline{a+b})$



b)  $ab + ab = ab$

