

Unidad 1

~~203~~
2) $(x-5) \cdot (x+3) - (x-2)^2 = -2x-8$

$$x^2 + 3x - 5x - 15 - (x^2 - 4x + 4) = -2x - 8$$

$$x^2 + 3x - 5x - 15 - x^2 + 4x - 4 = -2x - 8$$

$$3x - 5x - 15 + 4x - 4 = -2x - 8$$

$$3x - 5x + 4x + 2x = 8 + 15 + 4$$

$$4x = 11$$

$$x = \frac{11}{4}$$

1)

$$24 + 2(x-5) = 95$$

$$2x + 2x - 10 = 95$$

$$4x = 95 + 10$$

$$4x = 105$$

$$x = \frac{105}{4}$$

~~26,25~~

$$x = 26,25$$

R+A Se determina
Que el largo es
26,25 y el ancho
es $(26,25-5)$, o sea,
21,25

Unidad 2

3)

$$101011 = 1 \cdot 2^5 + 0 \cdot 2^4 + 1 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0$$

$$32 + 0 + 8 + 0 + 2 + 1 = 43$$

$$\boxed{101011 = 43}$$

$$AD = 13 \cdot 16^0 + 10 \cdot 16^1$$

$$A = 10 \quad D = 13$$

$$13 + 160$$

$$\boxed{AD = 173}$$

4) De Hexa a decimal

$$BF,7 = 11 \cdot 16^1 + 15 \cdot 16^0 + 7 \cdot 16^{-1}$$

$$B = 11 \quad F = 15$$

$$176 + 15 + 0,4375$$

$$\boxed{BF,7 = 191,4375}$$

de Hexa a binario

$$\boxed{BF,7 = 10111111,0111}$$

$$B = 11 \quad F = 15, 7 = 0,4375$$

| | | | |
|---|---|---|---|
| 8 | 4 | 2 | 1 |
| 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 |

$$= B = 11$$

$$= F = 15$$

$$0,4375 \cdot 2 = 0,875$$

$$0,875 \cdot 2 = 1,75$$

$$0,75 \cdot 2 = 1,5$$

$$0,5 \cdot 2 = 1$$

5)

$$r \vee q \leftrightarrow \neg p$$

6)

$$\underset{0}{(p \vee r)} \wedge \underset{1}{(q \rightarrow r)}$$

$$V(r) = 0$$

$$V(q) = 0$$

$$V(p) = 0$$

$$V[(p \vee r) \wedge (q \rightarrow r)] = 0$$

RTA En la conjunción sólo es verdadero, cuando ambas ~~proposiciones~~ proposiciones ~~son~~ son, por lo tanto $V[(p \vee r) \wedge (q \rightarrow r)] = 0$

7) $U = \{2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$P(x) = "x \text{ es un número Primo}"$

$Q(x) = "x \text{ es mayor o igual que } 5"$

Hallar:

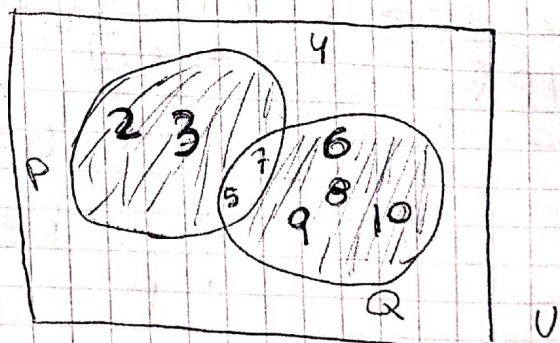
$$CV P(x) = \{2, 3, 5, 7\}$$

$$CV Q(x) = \{5, 6, 7, 8, 9, 10\}$$

~~CV~~

$$CV [P(x) \vee Q(x)] = \{2, 3, 6, 8, 9, 10\}$$

Diagrama de Venn:



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[Signature]