

$$\textcircled{1} a-) \underbrace{X'(Y'+Y)}_1 + XY = X' + XY = X' + \underbrace{X'Y}_1 + XY$$

$$\rightarrow = X' + Y(\underbrace{X+X'}_1) = \underline{X'+Y}$$

$$b-) \underbrace{B(A'+A)}_1 + \underbrace{B'(C'+C)}_1 = B+B' = \underline{1}$$

$$c-) Y + X'Z + XY' = Y + \underbrace{XY}_1 + X'Z + XY' = Y + X(\underbrace{Y+Y'}_1) + X'Z$$
$$\rightarrow = Y + X + \underbrace{XZ}_1 + X'Z = Y + X + Z(\underbrace{X+X'}_1)$$
$$\rightarrow = \underline{X+Y+Z}$$

*Yuvarlak icindekiler
 $X = X + AX$ den feldi.

$$\textcircled{2} a-) F = X' + YV'X + X'ZW + Y'V'W$$

$$\rightarrow = X'(1 + ZW) + V'XY + V'Y'W$$

$$\rightarrow = \underbrace{X' + V'X}_1 Y + V'Y'W = X' + V'Y + V'Y'W = X' + V'(\underbrace{Y + Y'W}_1)$$

$$P\bar{A} + A = P + A$$

$$P\bar{A} + A = P + A$$

$$\rightarrow = X' + V'(Y + W) = \underline{X' + V'Y + V'W}$$

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$$b-) F = X + Y(Z + X'Z') = X + Y(X' + Z)$$

$$P\bar{A} + A = P + A$$

$$\rightarrow = \underbrace{X + X'Y}_{P\bar{A} + A = P + A} + YZ = X + Y + YZ = X + Y(\underbrace{1 + Z}_1) = \underbrace{X + Y}_{\text{wavy}}$$

$$c-) F = WXZ(\underbrace{1 + Y}_1) + XW(\underbrace{1 + YZ}_1)$$

$$\rightarrow = WXZ + XW = XW(\underbrace{1 + Z}_1) = \underbrace{XW}_{\text{wavy}}$$