



loi des noeuds :  $i_1 = i_2 + i_3$

$$U = Z\tilde{i} \Rightarrow \tilde{i} = YU$$

$$V_{AP} \cdot Y_1 = V_{PB} Y_2 + V_{PC} \cdot Y_3$$

$$(V_A - V_P) Y_1 = (V_P - V_B) Y_2 + (V_P - V_C) Y_3$$

$$V_P (Y_1 + Y_2 + Y_3) = V_A Y_1 + V_B Y_2 + V_C Y_3$$

$$V_P = \frac{V_A Y_1 + V_B Y_2 + V_C Y_3}{Y_1 + Y_2 + Y_3}$$