Problem 1

Given:
R₁ = 9 Ω
R₂ = 6 Ω
R₃ = 10 Ω
R₄ = 4 Ω
R_L = 20 Ω
Iₛ = 2 A
Vₛ₁ = 8 V
Vₛ₂ = 20 V

Find: Rₜ, Vₜ, Iₙ Independently
Do Not Use Vₜ=RₜIₙ

Problem 2

Given:
R₁ = 2 Ω
R₂ = 3 Ω
R₃ = 3 Ω
R_L = 5 Ω
Iₛ = 2 A
Vₛ = 10 V

Find: Rₜ, Vₜ, Iₙ Independently
Do Not Use Vₜ=RₜIₙ

Problem 3

Given:
R₁ = 3 Ω
R₂ = 6 Ω
R₃ = 1 Ω
R_L = 4 Ω
Iₛ = 4 A
Vₛ₁ = 20 V
Vₛ₂ = 10 V

Find: Rₜ, Vₜ, Iₙ Independently
Do Not Use Vₜ=RₜIₙ
**Problem 4**

Given:
- \( R_1 = 20 \, \Omega \)
- \( R_2 = 4 \, \Omega \)
- \( R_3 = 12 \, \Omega \)
- \( I_{s1} = 12 \, A \)
- \( I_{s2} = 9 \, A \)
- \( V_s = 12 \, V \)

Find: \( i \) via superposition

**Problem 5**

Given:
- Using the Thevenin equivalent circuit (voltage divider) and the values for \( V_T \) and \( R_T \) found in Problem 1.

Find:
- The equation for the power absorbed by the load in terms of \( V_T \), \( R_T \) and \( R_L \).
- Plot the power to the load for \( R_L \) – chose the range so it is reasonable and you see a maximum.
- What is the value of \( R_L \) for maximum power delivered to the load?