# 6.5 Combination Circuits

1.



R₁ = 100Ω
100 V
R₂ = 1500 Ω
R₃ = 1500 Ω
R₄ = 150 Ω

| $V_{Total}=$ | $V_1=$ | $V_2=$ | $V_3=$ | $V_4=$ |
|---|---|---|---|---|
| $I_o=$ | $I_1=$ | $I_2=$ | $I_3=$ | $I_4=$ |
| $R_{Total}=$ | $R_1=$ | $R_2=$ | $R_3=$ | $R_4=$ |

2.



R₁ = 250Ω
R₃ = 500 Ω
100 V
R₂ = 1500 Ω
R₄ = 1000Ω
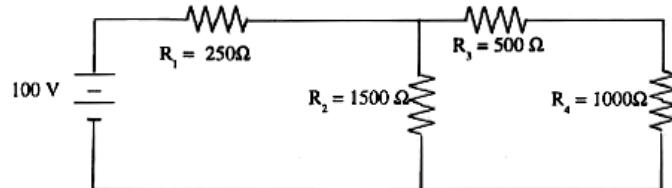
| $V_{Total}=$ | $V_1=$ | $V_2=$ | $V_3=$ | $V_4=$ |
|---|---|---|---|---|
| $I_o=$ | $I_1=$ | $I_2=$ | $I_3=$ | $I_4=$ |
| $R_{Total}=$ | $R_1=$ | $R_2=$ | $R_3=$ | $R_4=$ |

**3.**
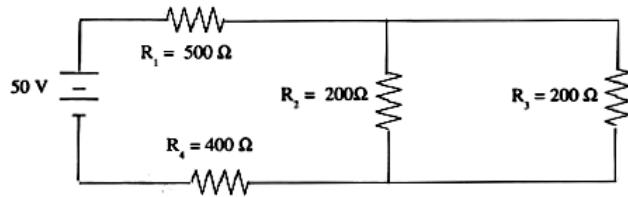


| V$_{Total}$= | V$_1$= | V$_2$= | V$_3$= | V$_4$= |
|---|---|---|---|---|
| I$_o$= | I$_1$= | I$_2$= | I$_3$= | I$_4$= |
| R$_{Total}$= | R$_1$= | R$_2$= | R$_3$= | R$_4$= |

**4.**
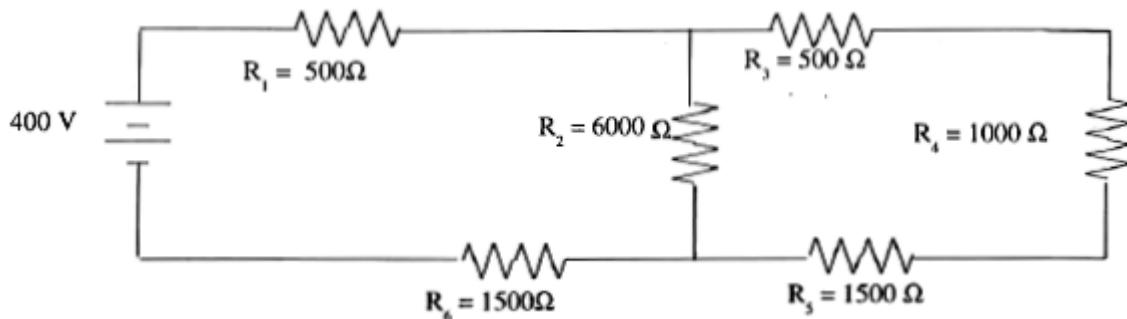


| V$_{Total}$= | V$_1$= | V$_2$= | V$_3$= | V$_4$= | V$_5$= | V$_6$= |
|---|---|---|---|---|---|---|
| I$_o$= | I$_1$= | I$_2$= | I$_3$= | I$_4$= | I$_5$= | I$_6$= |
| R$_{Total}$= | R$_1$= | R$_2$= | R$_3$= | R$_4$= | R$_5$= | R$_6$= |

5.



R₁ = 2500Ω … 100 V … R₂ = 10,000Ω … R₃ = 1000 Ω … R₅ = 500Ω … R₄ = 1500 Ω
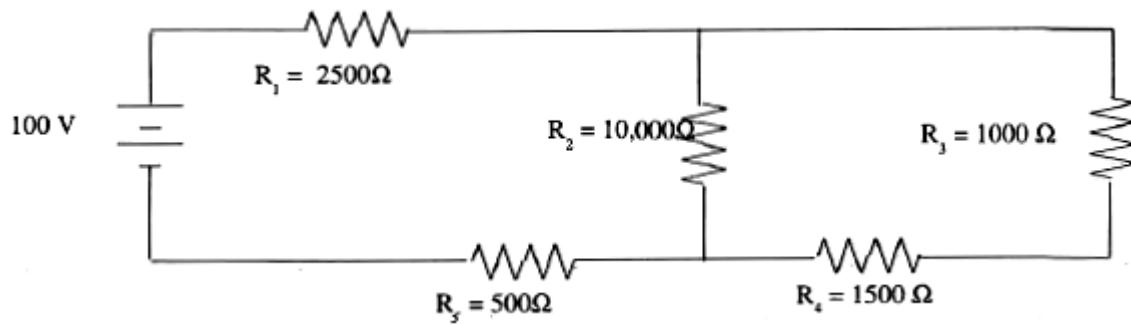
| V_Total= | V₁= | V₂= | V₃= | V₄= | V₅= |
|----------|-----|-----|-----|-----|-----|
| I₀= | I₁= | I₂= | I₃= | I₄= | I₅= |
| R_Total= | R₁= | R₂= | R₃= | R₄= | R₅= |

6. Determine the power in the circled resistor