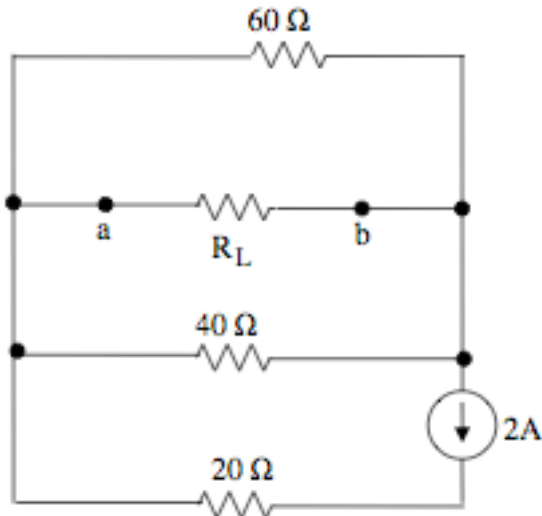


Ex:



- Calculate the value of R_L that would absorb maximum power.
- Calculate that value of maximum power R_L could absorb.

SOL'N:

$R_L = R_{Th}$
 $R_L = 60 \parallel 40 = \frac{60(40)}{100} = \boxed{24\Omega}$

$power = \frac{V_{Th}^2}{4R_{Th}}$

$V_{Th} = I_1(60) = \left[\frac{2(40)}{100} \right] 60 = 48V$

$power = \frac{(48)^2}{4(24)} = \boxed{24W}$

Handwritten notes:
 - $20\Omega R$ floating!
 - current divider
 - I_1 through 60Ω resistor
 - V_{Th} across 60Ω resistor

Note: Circuit used to find max power value is shown below.



$$P = I \cdot V = I^2 R$$

$$P = \frac{V_{th}^2}{(2R_{th})^2} \cdot R_{th}$$

$$P = \frac{V_{th}^2}{4R_{th}}$$