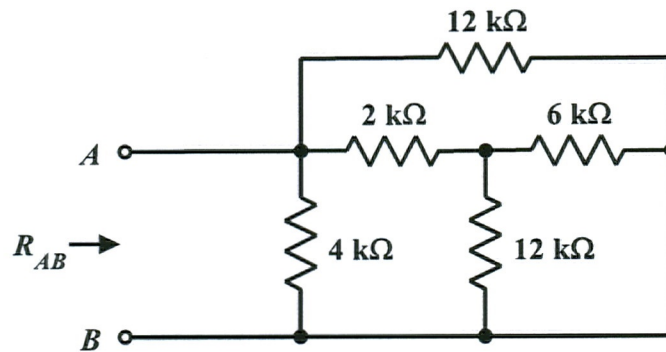


EE/EET 2240
Homework Problem #015

Determine the value of the equivalent resistance R_{AB} .



$$\begin{aligned} R_{AB} &= 4\text{ k}\Omega \parallel 12\text{ k}\Omega \parallel [2\text{ k}\Omega + (6\text{ k}\Omega \parallel 12\text{ k}\Omega)] \\ &= 4\text{ k}\Omega \parallel 12\text{ k}\Omega \parallel [2\text{ k}\Omega + 4\text{ k}\Omega] \\ &= 4\text{ k}\Omega \parallel 12\text{ k}\Omega \parallel 6\text{ k}\Omega \\ &= 4\text{ k}\Omega \parallel 4\text{ k}\Omega \\ &= 2\text{ k}\Omega \end{aligned}$$