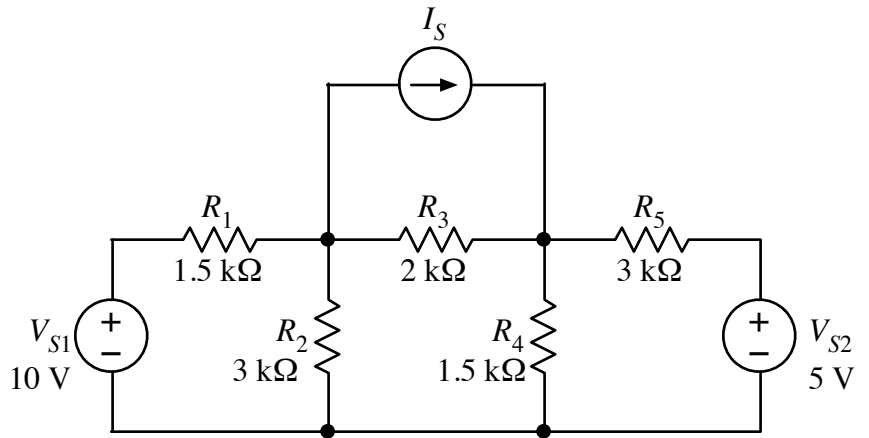


Use the method of superposition to find the value of I_S that makes the voltage across R_3 equal to zero. (Same as the current through R_3 being zero.)



$I_S =$ _____

Suggestion: Find the contributions of V_{S1} and V_{S2} to v_{R3} . Then find an expression for the contribution of I_S to v_{R3} . Use that to calculate the value of I_S that will offset the effects of V_{S1} and V_{S2} .