Circuit Connection Types

Name	Definition	Example
Node	A point where two or more circuit elements join	a
Essential Node	A node where three or more circuit elements join	b
Path	A trace of adjoining basic elements with no elements included more than once	$v_1 - R_1 - R_5 - R_6$
Branch	A path that connects two nodes	R_1
Essential Branch	A path which connects two essential nodes without passing through an essential node	$v_1 - R_1$
Loop	A path whose last node is the same as the starting node	$v_1 - R_1 - R_5 - R_6 - R_4 - v_2$
Mesh	A loop that does not enclose any other loops	$v_1 - R_1 - R_5 - R_3 - R_2$