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1. a) $v_1 = 6 \text{ V}$, b) $10\Omega \parallel 15\Omega = 6\Omega$. $v_1 = 6\text{V}$.
 2. $v_1 = v_{s1} R_2 / (R_1 + R_2) + v_{s2} R_1 / (R_1 + R_2)$
 3. $v_1 = -592.4 \text{ V}$, $v_2 = -594 \text{ V}$
 4. If ref under 7Ω , v_1 above 7Ω then 16 V at node below 15Ω and 46 V at node above 15Ω . $v_1 = -7 \text{ V}$
 5. $v_1 = 8 \text{ V}$, $v_2 = -16 \text{ V}$