Answer the following questions:

Q1. Do nodal analysis by writing the supernode (a-b) equation. Arrange terms in order: Va term and then Vb term on the left and a constant on the right. Manipulate and simplify the equation such that (1) all variables are nodal voltages, (2) the equation is written as a sum of products and (3) Va term is positive.

Q2. Solve for Vb.

Q3. Solve for i1.

Write your answers in the following format.

Q1.1: 0.0 Va + 0.0 Vb = 0.0
Q1.2. Vb = 0.0 V
Q1.3. i1 = 0.0 A