1. **Series and Parallel Combinations**

For the resistor network shown below, find an equivalent resistance between the terminals A and B using the resistor combination rules for series and parallel resistors.

![Resistor Network Diagram]

2. **Superposition**

For the following circuits:

i. Use the superposition theorem to solve for the voltages across the resistors. First, redraw the circuits with just one source (while zero-ing the other source). Then, for each circuit solve for each element voltage. Finally, sum the voltages at each node.

(a)

![Circuit Diagram (a)]

(b)

![Circuit Diagram (b)]
3. **Thevenin and Norton Equivalence**

The general Thévenin and Norton equivalents are shown below:

Find the Thévenin and Norton equivalents across terminals $a$ and $b$ for the circuit given below.