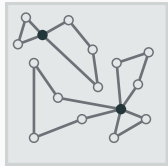
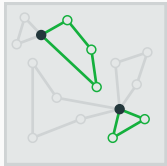
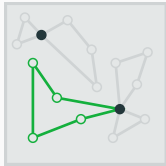
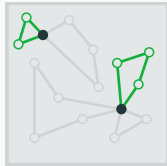


Input



Step 1 Solution



Step 2 Solution