1.) In the force-directed placement algorithm, you have decided to move node D. Given the nets shown, and the node positions shown – in (X, Y) format – calculate the target location for node D.

2.) We are in the middle of routing a multi-terminal net from S to D1 and D2. We have completed the route to D1 as shown. We now want to do the routing to D2. Use the A*/Detour routing algorithm. First, indicate in each square that the algorithm visits the distance computed with the A*/Detour algorithm (that is, the distance routed + the crow flies). Do not fill in any squares not visited by the algorithm. Then, draw in the final routing for this net.

Note: if a new path is found to a square with a lower cost than the previous path, you should overwrite the previous path with the new one.