At first spend at most 5 minutes per problem.

1. Which of the following objects can be drawn without retracing a line or picking up your pen/pencil? If possible, indicate the order in which the lines are drawn, and state where to start and stop. If not possible write “impossible.”

A       B    C   D

2. On the right is a map of city streets:

(a) Read the two scenarios below and state the difference between these two situations. Then do parts (b) and (c).

i) A city street crew is sent to the section of town represented on the above map to repair potholes. Since every street must be inspected for potholes, the crew would like to find a route that travels down each street exactly once. (b) Is it possible to find such a route? If not, explain why you think it cannot be done.

ii) Another crew is sent to this same section of the city to install new stop signs on every street corner, the crew would like to find a route that travels to each corner only once. (c) What route should the crew take so that each intersection is visited exactly once? Is there more than one route that would achieve this goal? Explain.