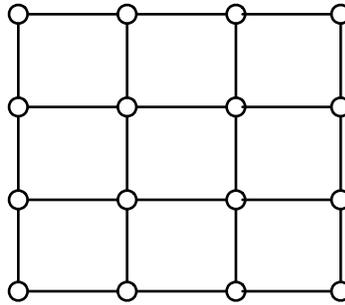
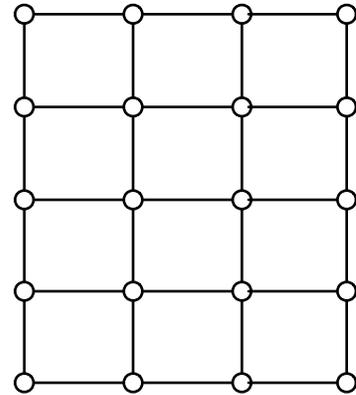


(A)



(B)



(C)

Which of these street grids has (a) an Euler Circuit? _____

(b) a Hamiltonian Cycle? _____ If it has a Hamiltonian Cycle, show it below.

If it does not, can you explain why it does not? (Hint: consider the checkerboard "two-coloring" of the vertices shown below. for the 3 by 3 grid. Why must any cycle alternate colors? What will that do to the overall cycle?)

(c) If a grid does not have an Euler circuit, "Eulerize it" by adding the fewest number of "double-back streets" (multiple edge streets) that you can in the diagram above. A multiple edge looks like this: 

