HOMEWORK 5

(1) Characterize simple graphs that have independence number 1.

(2) For the graph G given below, use the recursive method shown in class to find the domination number $\gamma(G)$.
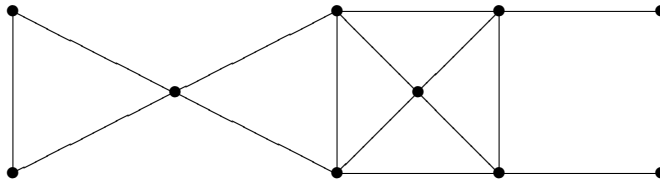
(3) There are five breakfast items left on the common room kitchen table; a bagel, a donut, a pound cake, a turnover and a croissant. Anthony likes bagels and donuts, Allen prefers pound cake and Angela could go for a donut, a turnover or a croissant. Alexandra also enjoys turnovers and croissants, but not donuts. Adam is good, he ate already.

Use Hall's Theorem on the set {Anthony, Allen, Angela, Alexandra, Adam} to show whether or not everyone can have a good breakfast.