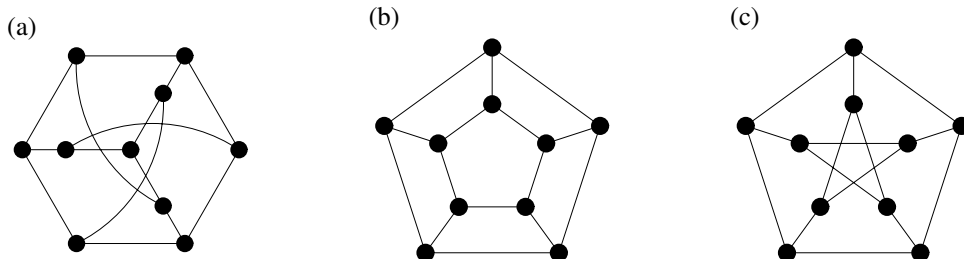


ASSIGNMENT 2—DUE FRIDAY, FEBRUARY 16, 2007

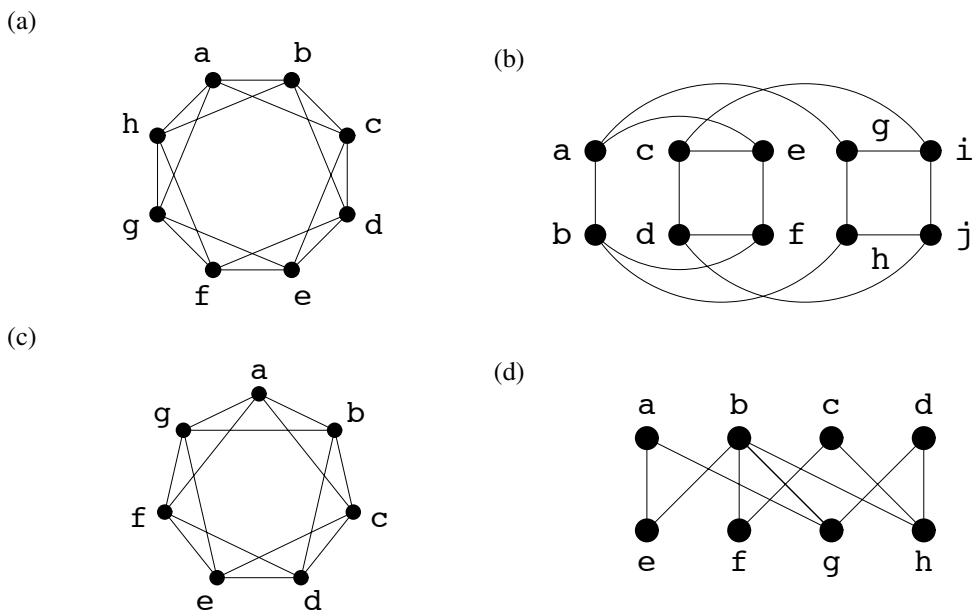
- (1) Two of the following three graphs are isomorphic. The third is different.



(a) Draw the two that are isomorphic with vertex labels showing that they're isomorphic.

(b) (Harder!) Explain why the third graph is not isomorphic to the other two.

- (2) Exactly one of the following graphs is not planar. Give planar drawings of the other three. (Please include vertex labels.)



- (3) Six polite, yet antisocial people realize that they do need to speak with each other occasionally. They'd all prefer to do so only with plenty of warning, though: telephone first, ring the bell upon arrival, etc. All six people are especially upset by the possibility of running into each other accidentally. Sketch how these six people might draw paths connecting their houses with as few crossings as possible.