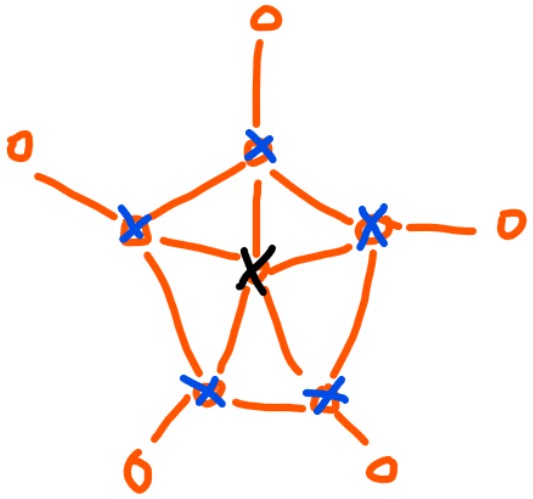
Theory Quiz 9c answers:

Question 1: The blue crossed vertices around the pentagon form the optimal solution, but the black crossed one in the middle would be included by the optimal solution.



Question 2: For every edge {uv}, we must have the constraint x_u + x_v >= 1
The objective is to minimize \sum x_u (where the sum ranges over the vertices u)

Question 3: O(m+n)

Question 4: a) 2 vertices are required
b) There is a solution to the linear program that uses 1.5. The constraints are x_a + x_b >= 1, x_a + x_c >= 1, and x_b + x_c >= 1, so if we select 0.5 for x_a, x_b, and x_c, all the constraints are met and the value is minimized to 1.5