**LT #5: Linear Programming**

1. Constraints: Objective Function: (6 points)

$x\geq 2$ $C\left(x,y\right)=x+5y$

$$y\geq 0$$

$$3x+2y\leq 12$$

1. Graph the system of constraints.
2. Name the vertices
3. What values of x and y minimize the cost function above?
4. What is the minimum cost?
5. **A farmer has 100 acres to plant almond trees and olive trees. The farmer must plant at least 30 acres of almonds and at least 20 acres of olives. If the farmer earns $500 per acre of almonds and $600 per acre of olives, how many acres of each crop should be planted to maximize profit?**
6. **Define your variables (1 point)**
7. **Write the objective function (1 point)**
8. **Write the constraints (4 points)**

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