1. Maximize the following function using **Golden Selection Search**:

$$f(x) = -3x^2 + 21.6x + 5$$

Interval: [0,10]

2. Consider the **linear programming** problem:
Maximize f(x, y) = 6x + 8y
subject to
5x + 2y ≤ 40
6x + 6y ≤ 60
2x + 4y ≤ 32
x ≥ 0
y ≥ 0
Obtain the solution:
(a) Graphically.
(b) Using the simplex method.