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

Interval: [-1,3]

Use 0.0005 as relative approximation error.

**2.** Consider the **linear programming problem**:  
Maximize f(x, y) =   
subject to  
1.2x + 2.25y ≤ 14  
x + 1.1y ≤ 8  
2.5x + y ≤ 9  
x ≥ 0  
y ≥ 0  
Obtain the solution:  
**(a)** Graphically.  
**(b)** Using the simplex method.