



# Homework for Chapter 5

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1. Solve the problem using the Simplex Method: (20pts)

$$\min f(\mathbf{X}) = -3x_1 - 2x_2$$

$$\text{s.t.} \quad x_1 - 2x_2 + 4 \geq 0$$

$$3x_1 + 2x_2 \leq 14$$

$$x_2 - x_1 \geq -3$$

$$x_1, x_2 \geq 0$$



## Due in Final Exam

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**2. Solve the problem using the Simplex Method:**  
**(20pts)**

$$\min f(\mathbf{X}) = -3x_1 - 2x_2 - x_3 + x_4$$

$$\text{s. t. } 3x_1 + 2x_2 + x_3 = 15$$

$$5x_1 + x_2 + 3x_3 = 20$$

$$x_1 + 2x_2 + 3x_3 + x_4 = 10$$

$$x_1, x_2, x_3, x_4 \geq 0$$