



Midterm Exam: First Course  
2023-2024

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**Q1/** Find the optimum solution of the linear programming by using (**Graphically method**).

$$\text{Max. } z = x_1 + 3x_2$$

s. to:

$$x_1 + 2x_2 \geq 10$$

$$2x_1 + x_2 \leq 8$$

$$x_1, x_2 \geq 0$$

**Q2/** Find the optimal solution of this problem by using (**Simplex method**).

$$\text{Max. } z = 5x_1 + 6x_2$$

s. to

$$3x_1 + x_2 \leq 48$$

$$3x_1 + 4x_2 \leq 120$$

$$x_1, x_2 \geq 0$$

Head department  
Chewar Ahmed Salar

Lecturer of the subject  
Duaa Faiz Abdullah