Applied Finite Mathematics, 3rd ed, 2016 Sekhon/Bloom

Chapter 3: Linear Programming: Geometric approach
Answers to Odd Numbered Homework Problems and Answers to all Problems in the Chapter Review Section

Answers To Odd-numbered Problems

3.1 Maximization Applications

1). 80 acres of wheat and 20 acres of corn should be planted to maximize profit to $8,400.

3). 10 chairs and 15 tables should be manufactured to maximize profit to $650.

5) Maximum value of Z is 40 when x = 0 and y = 4

3.2 Minimization Applications

1). 30 units of Food A and 45 units of Food B should be purchased to keep costs at a minimum of $105.

3). Cost: C = 12,000 x + 10,000 y

I.	$200x + 100y \geq 800$	high-grade oil
II.	$300x + 100y \geq 900$	medium-grade oil
III.	$200x + 200y \geq 1000$	low-grade oil

Refinery A should be operated for 3 days, while Refinery B should be operated for 2 days to keep a minimum cost of $56,000.

3.3 Chapter Review

1). (16000, 4000); $2240	2). (2, 3); $34,500	3). (8, 20); $480
4). (12000, 8000)	5). (72, 180; $5760	6). (165, 35); $21,750
7). (20, 60); $34	8). (20, 20); $2.40	9). (6, 18); $1650
10). (35, 100; $2600	11). (40, 20); $100,000	12). (10, 5): 17.5 minutes
13). (1000, 800); $7400		