

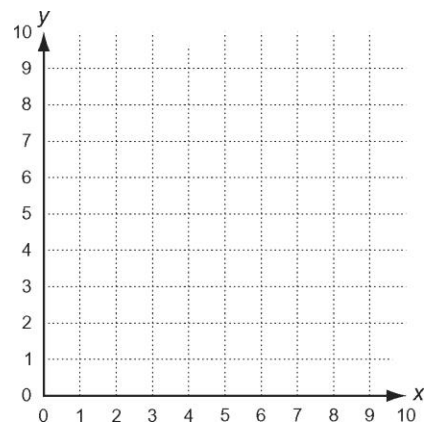
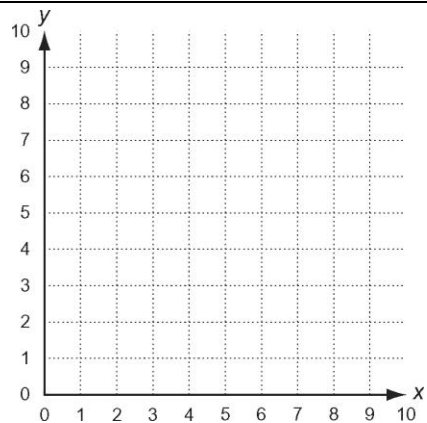
LESSON
3-4

Practice B
Linear Programming

Maximize or minimize each objective function.

1. Maximize $P = 5x + 2y$
for the constraints $\begin{cases} y \geq 0 \\ x \geq 0 \\ y \leq -x + 10 \\ y \leq 2x + 1 \end{cases}$

2. Minimize $P = 4x + 6y$
for the constraints $\begin{cases} 0 \leq x \leq 4 \\ y \geq 1 \\ y \geq -x + 4 \end{cases}$



Solve.

3. A grocer buys cases of almonds and walnuts. Almonds are packaged 20 bags per case. The grocer pays \$30 per case of almonds and makes a profit of \$17 per case. Walnuts are packaged 24 bags per case. The grocer pays \$26 per case of walnuts and makes a profit of \$15 per case. He orders no more than 300 bags of almonds and walnuts together at a maximum cost of \$400.

- Write the constraints. Use x for the number of cases of almonds ordered and y for the number of cases of walnuts ordered.
- Graph the constraints.
- Write the objective function for the profit.

d. How many cases of almonds and walnuts maximize the grocer's profit?

