

Chapter 5 Review Key

1. $(4, -6)$

4. $(-4, 5)$

2. $(-2, 0)$

5. \emptyset

3. $(-2, 0)$

6. $(-13, -3)$

7. $x + y = 360$
 $6x + 9y = 2610$

$x = 210$ (Student tickets)
 $y = 150$ (adult tickets)

8. $3(.04) + .1x = .06(3+x)$ 1.5 L of 10%

9. $\det = -7$

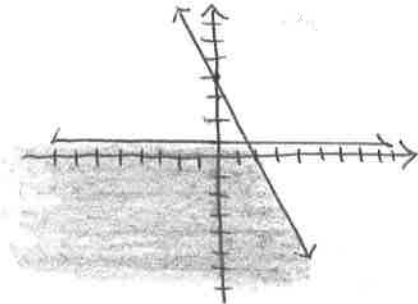
10. $-4B = [4 \ -16 \ -28 \ 12]$

11. $\begin{bmatrix} 2 & 10 \\ 3 & 14 \end{bmatrix}$

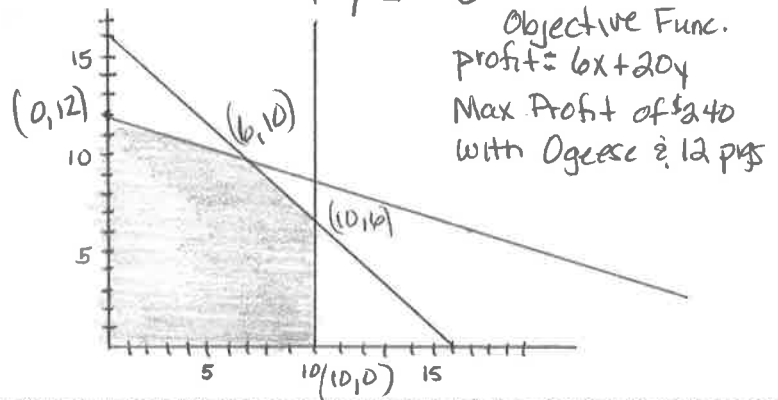
12. $D=1$ $\begin{bmatrix} 9 & -22 \\ -2 & 5 \end{bmatrix} \begin{bmatrix} 13 \\ 6 \end{bmatrix} = \begin{bmatrix} -15 \\ 4 \end{bmatrix}$ $x = -15$
 $y = 4$

13. $\begin{bmatrix} 72 \\ -67 \end{bmatrix}$

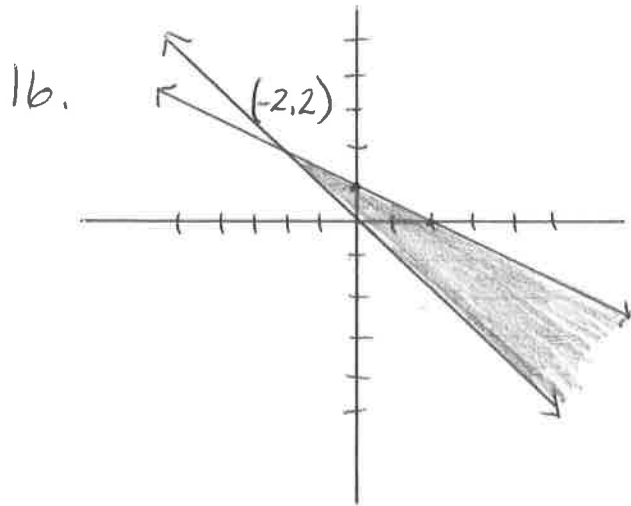
14.



15. $x = \# \text{ geese}$
 $y = \# \text{ pigs}$
 $x \geq 0 \quad y \geq 0$
 $x + y \leq 16 \quad x \leq 10$
 $5x + 5y \leq 180$



Chapter 5 Review Key P. 2



$$17. A^{-1} = \begin{bmatrix} -\frac{1}{3} & -\frac{1}{9} \\ -\frac{1}{9} & \frac{2}{27} \end{bmatrix}$$

$$\text{Det} = -27 \quad \frac{-1}{27} \begin{bmatrix} 9 & 3 \\ 3 & -2 \end{bmatrix} =$$

$$18. A^{-1} = \begin{bmatrix} \frac{4}{13} & \frac{5}{13} \\ \frac{-1}{13} & \frac{2}{13} \end{bmatrix}$$

$$\text{Det} = 13 \quad \frac{1}{13} \begin{bmatrix} 4 & 5 \\ -1 & 2 \end{bmatrix} =$$