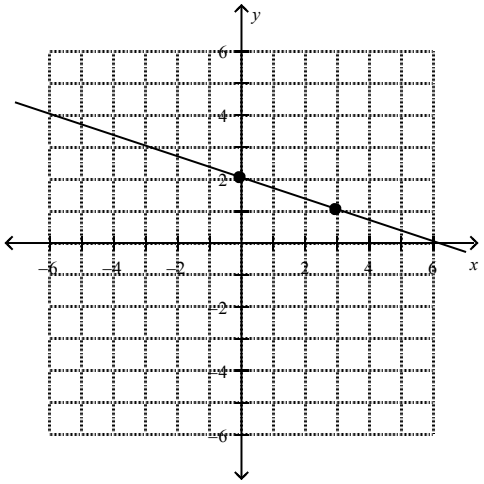
Solving Linear Systems Review – Solutions!

1. a) *c = 2h + 50* b) 2 hours
   c = 30h + 10
2. m = -4
3. m = $\frac{2}{7}$
4. *y + 2 = -2 (x – 4)*
5. $y - 5 = \frac{2}{3}(x - 1)$
6. $y - 4 = 5(x - 2)$ *OR y = 5x – 6*
7. $y + 3 = \frac{5}{3}(x + 2)$ *OR* $y = \frac{5}{3}x + \frac{1}{3}$

8.



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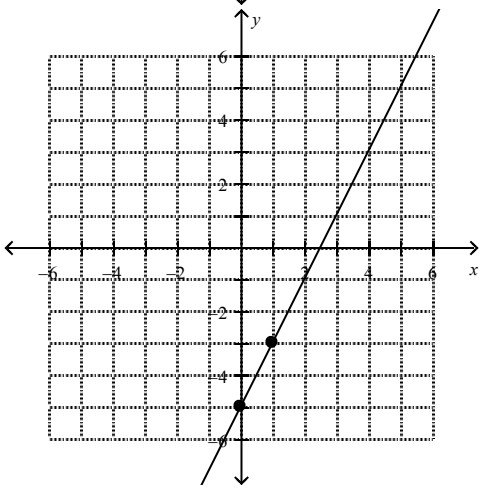

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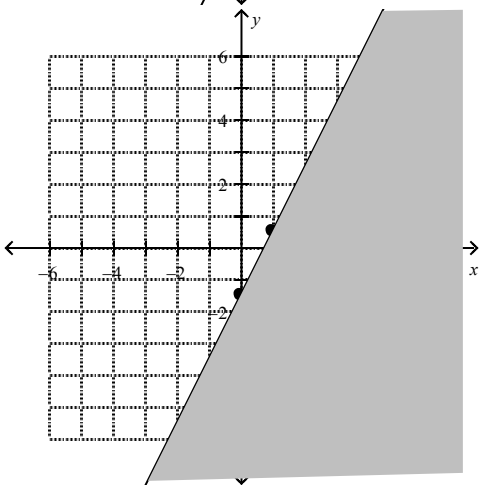
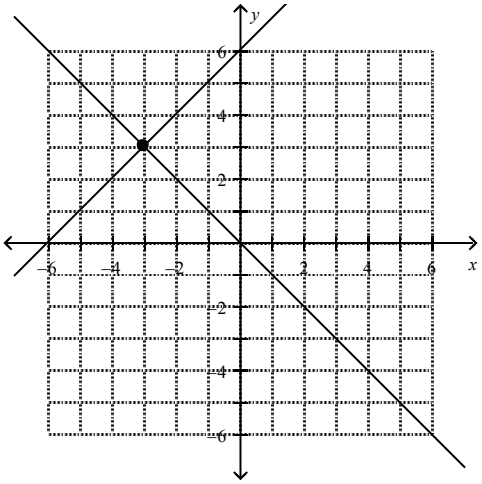
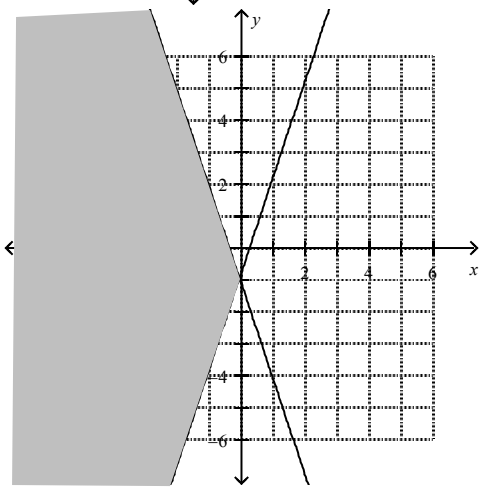


11. $y \geq \frac{4}{5}x + 4$
12. Independent
13. Dependent
14. (-3,3)



15.



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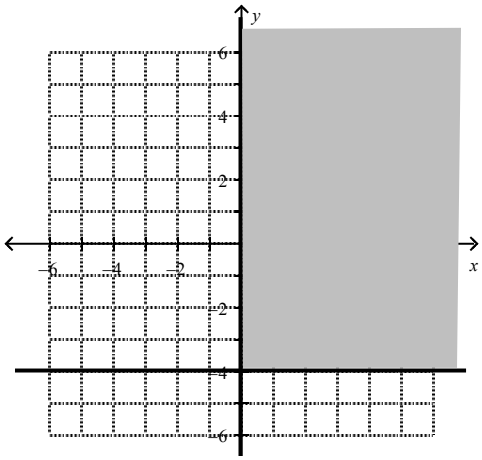
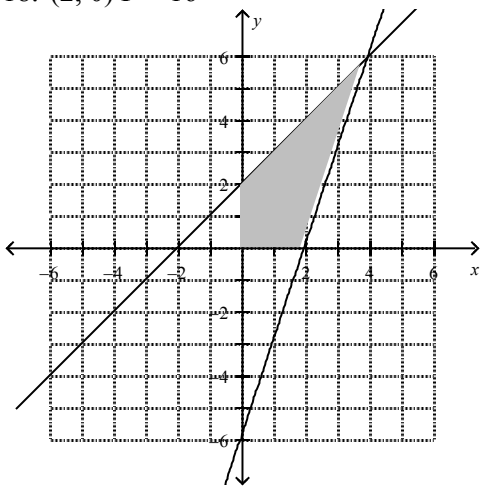
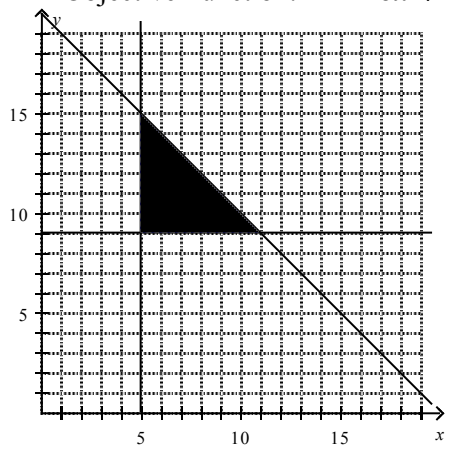


17. (4, 8) P = 48

18. (2, 0) P = 16



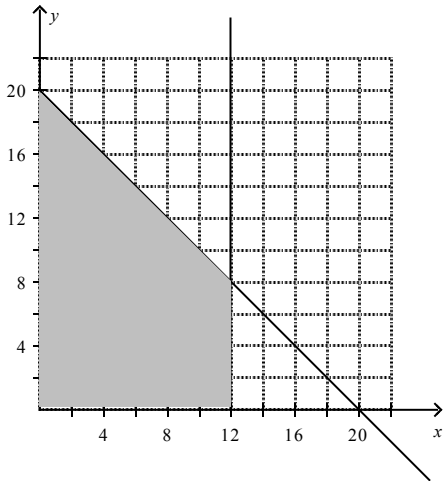
19. $x + y \leq 20$
    $x \geq 5$
    $y \geq 9$
    Objective Function: $P = 40x + 45y$



ANSWER: 5 business class tickets and 15 tourist class tickets will be sold to maximize profit.

20. x = -4, y = 0
21. x = -2, y = -1
22. x = -1, y = -3
23. x = -1, y = -2
24. no solutions
25. infinite solutions

26. x = vanilla, y = chocolate
    $x + y \leq 20$
    $x \leq 12$



27. No; the number of lunch menus is not 3 times the number of breakfast menus
28. [-6, 3)
29. $y = \sqrt{x - 1} + 5$
30. -2
31. -15
32. Vertical stretch x3
33. Reflection over x-axis and move right 4