**Name Date**

**Standard 6 Review: Systems**

**1. Indicate (yes/no) whether the given point is a solution to the system.**

**a.** 5x + 3y = -5 (2,-5) **b.** y = 3x – 2 (2, 4)

2x – 2y = 16 y = 1/2x + 3

**2. Sketch a graph of a system with each of the following number of solutions.**

**a.** Zero solutions  **b.** One Solution **c.** Two solutions **d.** ∞ solutions

**3. Solve the following systems of linear equations by graphing.**



**a.** x = -3 **b.** 2x + y = 4

y = -4 -3x + 3y = 3

Solution: Solution:



**c.** y = 2x + 1 **d.** y = -2x + 1

y = -1/2x – 4 4x + 2y = 4

Solution: Solution:

**4. Decide which method is best for solving the following systems. Explain why.**

**a.** y = 2x – 8 **b.** 4x – 2y = 4

3x – 5y = 7 9x + 2y = 80

**5. Solve the following systems with Substitution. Show your work.**

**a.** x = 3 **b.** y = 3x – 2

3x – 5y = 4 y = 2x + 3

Solution: Solution:

**c.** 4y – 8 = x **d.** 6x – 2y = 16

3x – 5y = 11 y = x + 2

Solution: Solution:

**6. Solve the systems with Linear Combination. Show your work.**

**a.** 3x + 2y = -2 **b.** 4x – 3y = 11

-3x + 5y = -26 2x + 6y = 28

Solution: Solution:

**c.** 4x + 2y = 8 **d.** 5x – 3y = 11

5x + 7y = 1 3x + 4y = 24

Solution: Solution:

**7. Solve the systems. Use any method.**

**a. -**4x + 6y = -5 **b.** x = 3 – y

4x – 6y = 5 2x + 2y = 1

Solution: Solution:

**8. MacDonald’s is having a burger sale. On Sunday you buy 11 hamburgers and 8 cheeseburgers and spend $36.50. Today so you buy 15 hamburgers, 4 cheese-burgers and spend a total of $32.50.**

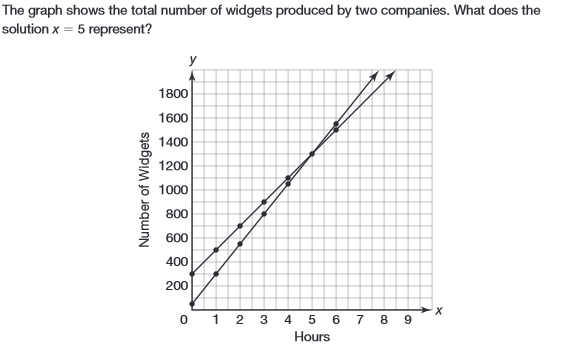
**a. Define your variables and write a system of linear equations for this situation.**

**b. Solve your system to find out how much it costs for a hamburger and how much a cheeseburger costs. Show your work.**

**9. The cafeteria is going to start selling Tornados (like Blizzards®, but different enough we won’t get sued). it costs $287 to buy the machine and $1.50 per serving to make them. They plan to charge $3.00 per serving.**

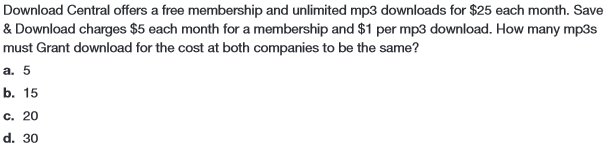
**a. Define your variables and write a system of linear equations for this situation.**

**b. Solve your system to find the break-even point. Show your work.**

**10.**



**11.**



**12.**

**13. Indicate whether the graph of the inequality would be represented with a solid or dotted line.**

**a.** 5x + 3y > -5 **b.** y ≤ 3x – 2 **c.** x = 6 **d.** y < 4x

**14. Indicate whether the following points are solutions to the inequality: 3x + 2y ≤ 7**

**a.** (0, 0) **b.** (1, 4) **c.** (3,-2) **d.** (-3, 4)

**15. Indicate whether the following points are solutions to the inequality: y > 3x – 1**

**a.** (0, 0) **b.** (1, 4) **c.** (3,-2) **d.** (-2, -6)

**16. Indicate whether the following points are solutions to the system: x < 13**

**y ≥ -9**

**a.** (13, 2)  **b.** (10, 4) **c.** (5,-9)

**17. Indicate whether the following points are solutions to the system: y ≤ -1/2x + 5**

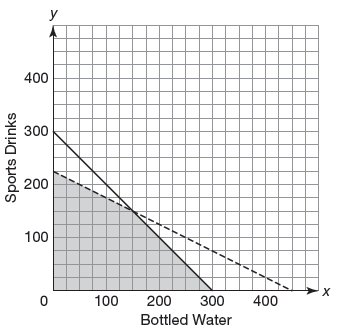
**3x – 2y > 5**

**a.** (0, 0)  **b.** (1, 2) **c.** (4, 3)

**18. Indicate whether the following points are solutions to the system: x ≤ 2**

**y < 3**

**a.** (0, 0)  **b.** (2, 2) **c.** (1, 4) **y > 4x − 1**



**19. Indicate whether the following points are solutions to the**

**graph the system:**

**a.** (0, 0)  **b.** (50, 200) **c.** (200, 100)

**20. Solve the following systems of linear inequalities by graphing.**



**a.** x > -2 **b.** x ≤ 0

y ≤ 3 y > 0



**c.** x > -3 **d.** 2x + y ≥ 4

y ≥ x -2x + 2y < 4



**e.** y < 2x + 1 **f.** y ≥ -2

y ≤ -1/2x – 4 y < 2x + 3

4x + 2y ≤ 8



**g.** y < 4 **h.** x ≥ -4

y ≥ -3 y < 3

x > -2 y ≤ x – 1

x ≤ 1

**21.** The Seahawks are planning to win the Superbowl. They are so confident that they aren’t even going try to score any touchdowns. Safeties are worth 2 points and field goals are 3 points. ***Show your work*.**

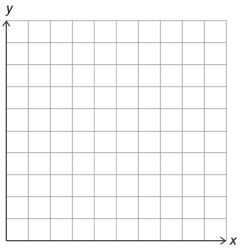
**a.** How much will they score if they get 2 safeties and 3 field goals?

**b.** How much will they score if they get 3 safeties and 4 field goals?

Pete Carroll believes if the Seahawks score *more than* 12 points, they will win. Use ***x*** for safeties and ***y*** for field goals.

**c.** Write an inequality for this situation?

**d.** Would they reach their goal in either of the situations above?



**e.** Graph your inequality from 2a.

***Label your axes***.

**f.** **According to your graph**, if they

score 3 safeties and kick 2 field

goals, will they meet their goal?

**g. According to your graph**, Will they

meet their goal if they score

2 safeties and kick 5 fieldgoals?