Math 110

Chapter 7 Practice Test

1. Let $f(x) = -5x + 3$. Find $f(-3)$.

2. Find the slope of the line through the given points. (-3, 0) and (3, 18).

3. Determine if the two given lines are parallel. Answer yes or no.
   $3y = 2x - 2$ $\qquad$ $8x - 12y = -2$

4. Find an equation of the line passing through the point (-2, -4) with slope = 3. Write in slope-intercept form.

5. Find an equation of the line passing through (-4, -2) and (-2, 4). Write in slope-intercept form.

6. and 7. Solve the following system of equations by substitution.

$2x + 2y = 4$ $\qquad$ $y = -x$

8. and 9. Solve the system of equations using the addition method.

$4x - 3y = 1$

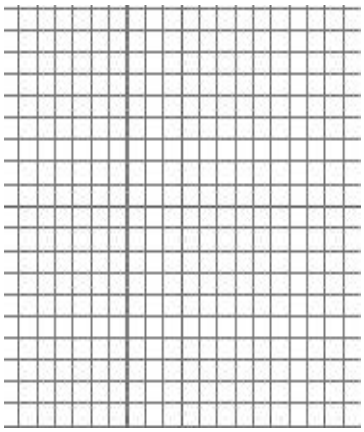
$3x - 4y = 4$

10. and 11. Solve the following system of equations by graphing.

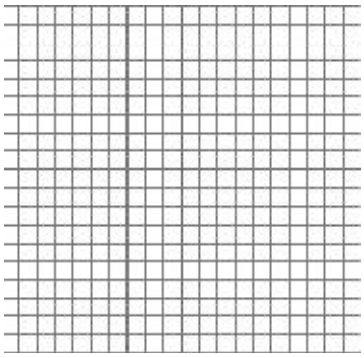
$y = 3x - 7$ $\qquad$ $y + 2x = 8$

12. The sum of two integers is 49. Find the two numbers if the larger is 8 less than twice the smaller.

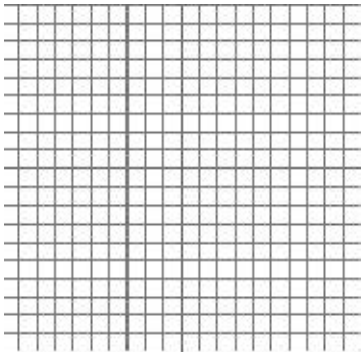
13. Graph by intercepts: $2x + 4y = 8$



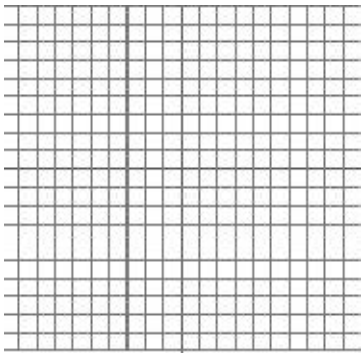
14. Graph by using the slope and y intercept. $3x + 6y = 12$.



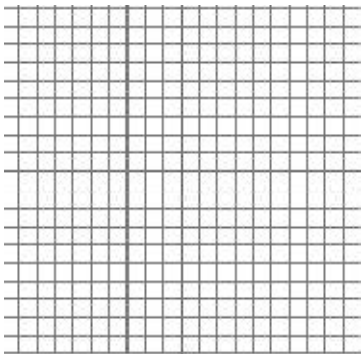
15. Graph by plotting points. $2x + y = 6$.



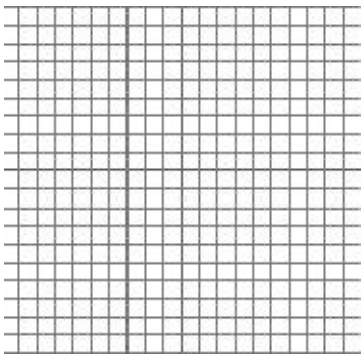
16. Graph: $3x + 4y \leq 12$.



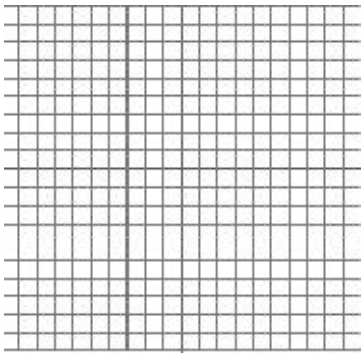
17. Graph: $x = 1$



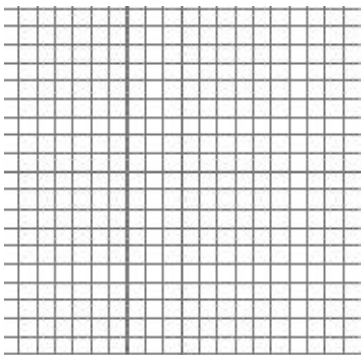
18. Draw a graph of a line whose slope is zero.



19. Graph: $y > 2x$



20. Graph: $x = y$



21. Graph the system: $3x + 2y \geq 12$ $x<y$

22. At Rhonda's diner, three loaded baked potatoes and five cheeseburgers provide 3820 calories. One loaded baked potato and four cheeseburgers provide 2370. How many calories in one baked potato? How many calories in one cheeseburger?

23. I look out my front window and see children and dogs playing in my front yard. When I look out, I see 18 heads and I count 60 feet and paws. How many children and how many dogs are playing in my front yard?

24. Using the slope-intercept form, write a system of equations that are perpendicular.

25. Write the equation of the line through (2,-7) which is perpendicular to $5x + 2y = 18$.