Algebra II Worksheet #4 Unit 2 page 1 _____

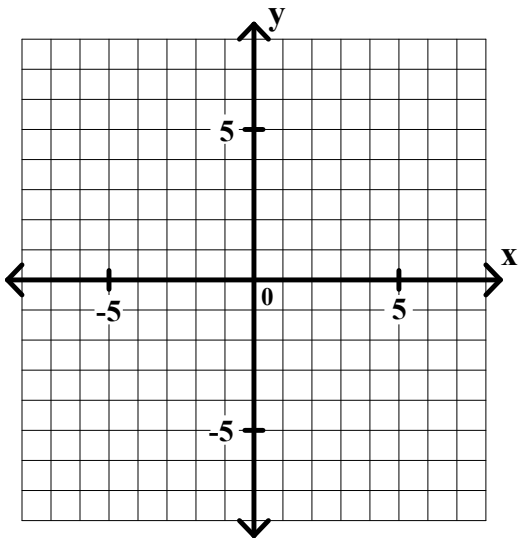
For each of the following linear equations in two variables: (a) find the x and y intercepts, (b) write the equation in slope-intercept form, and (c) graph the equation.

1. 2x + 3y = 12

(a) x intercept: ___ y intercept: ___

(b) slope intercept equation:_____

(c)

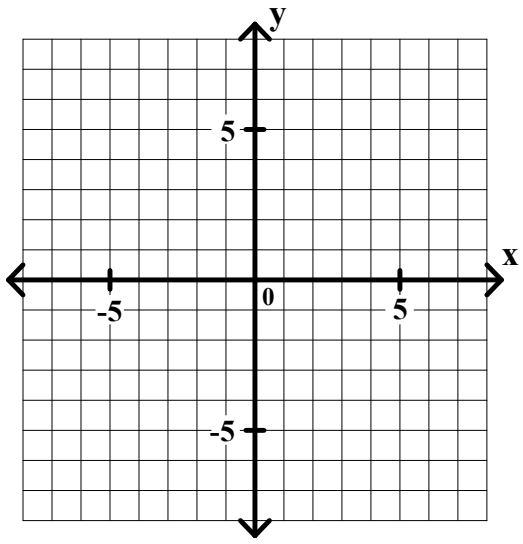


2. 4x – 3y = 9

(a) x intercept: ___ y intercept: ___

(b) slope intercept equation: _____

(c)

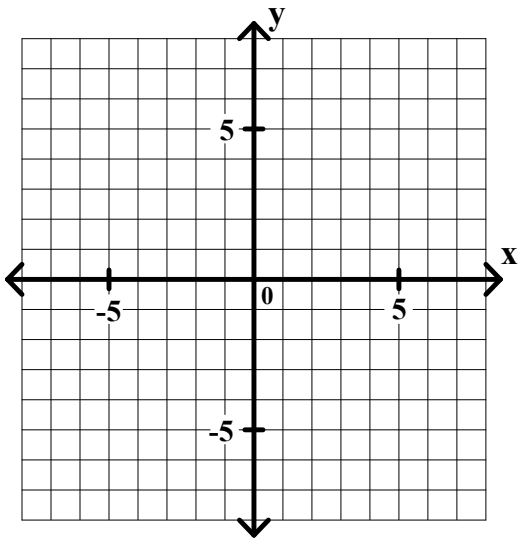


3. 3x + 5y = -15

(a) x intercept: ___ y intercept: ___

(b) slope intercept equation:_____

(c)

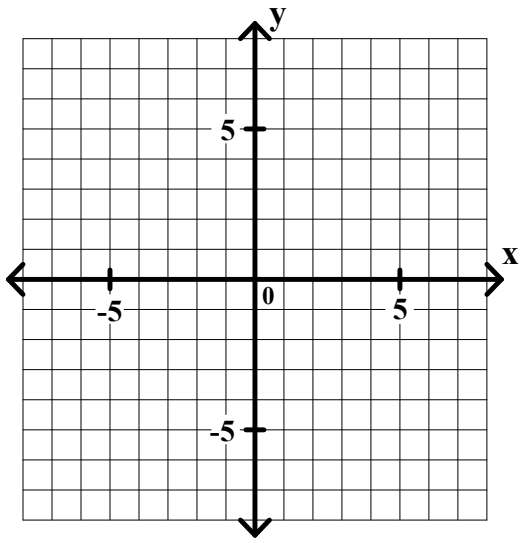


4. 5x – 3y = -3

(a) x intercept: ___ y intercept: ___

(b) slope intercept equation: _____

(c)



Algebra II Worksheet #4 Unit 2 page 2

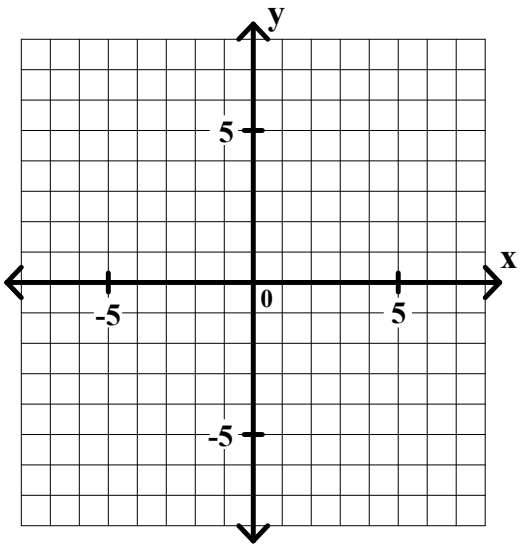
Graph each of the following. Label each graph with its equation.

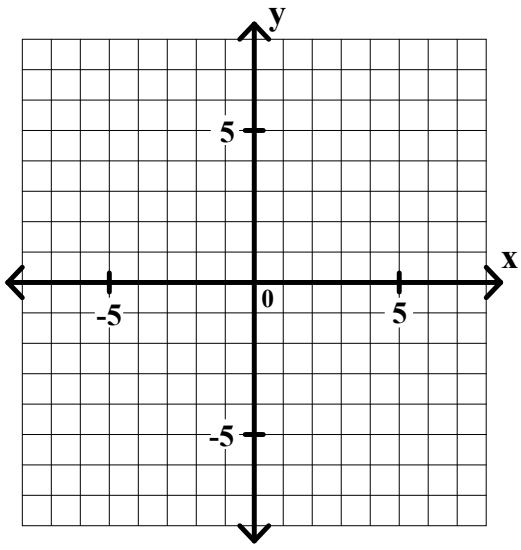
5. $-2x + 3y = -6$

6. $7x + 4y = 0$

7. $x + 2y = -8$

8. $x - 4y = 8$



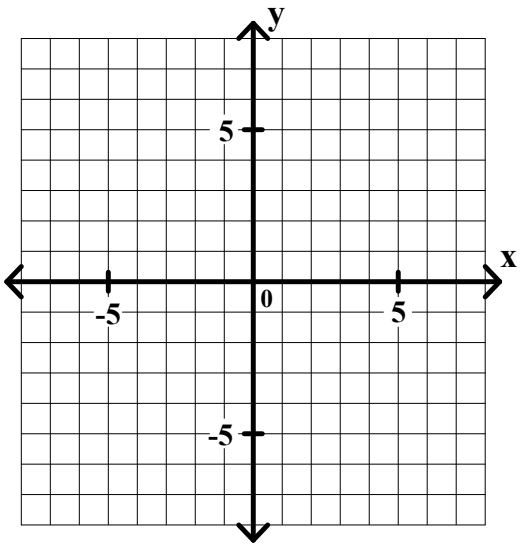


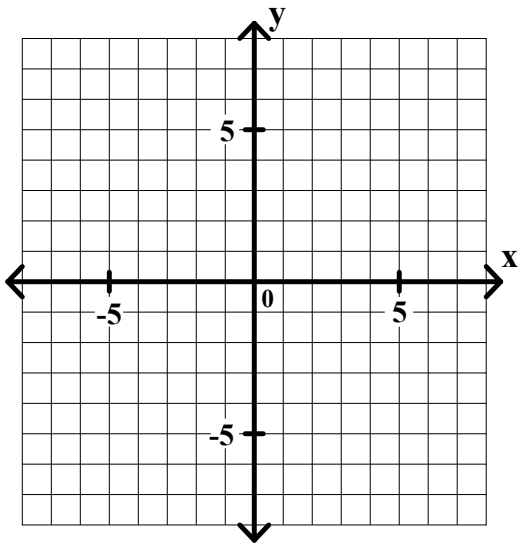
9. $3x + y = -3$

10. $5x - y = 2$

11. $x = 4$

12. $y = -3$





Write the equation of each line described. If the line is oblique, use slope-intercept form.

13. The horizontal line through (-4, -3). _____

14. The vertical line through (-4, -3). _____

15. The line with slope 0 through (5, 3). _____

16. The line with "no slope" through (5, 3). _____

17. The line with slope 3/4 and y-intercept -3. _____

18. The line with slope 3/5 through (0,-2). _____

19. The line through (0,-3) and (2,4). _____

20. The line with slope -1/4 through (-4, -3). _____

21. The line with slope -3/5 through (2, 3). _____

Write the equation of each line described. If the line is oblique, use slope-intercept form.

22. The line through (-2, 3) and (-2, -1). _____

23. The line through (-3, -4) and (6, 2). _____

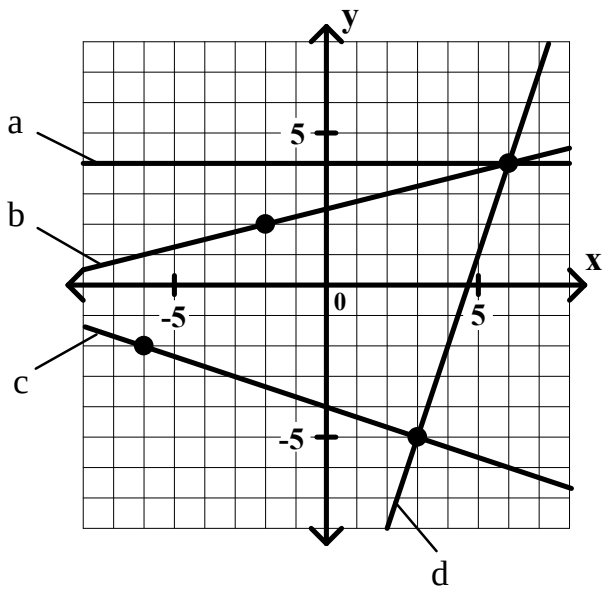
24. The line through (-4, 5) and (2, -3). _____

25. Line a: _____

26. Line b: _____

27. Line c: _____

28. Line d: _____



Find the equation of each line described below. If the line is oblique, write the slope-intercept equation. Graph both equations (the given equation as well as your solution).

29. The line through (0, 5) that is parallel to $5x - 2y = 6$. _____

30. The line through (0, -1) that is parallel to $-4x + 3y = 9$. _____

31. The line through (4, 3) that is parallel to $x = -1$. _____

32. The line through (-3, 2) that is parallel to $y = -4$. _____

33. The line through (-3, 0) that is parallel to $x + y = 5$. _____

34. The line through (-6, 0) that is parallel to $3x - 2y = 10$. _____

Algebra II Worksheet #4 Unit 2 page 6

Find the equation of each line described below. If the line is oblique, write the slope-intercept equation. Graph both equations (the given equation as well as your solution).

35. The line through (0, 5) that is perpendicular to $5x - 2y = 6$. _____

36. The line through (0, -1) that is perpendicular to $-4x + 3y = 9$ _____

37. The line through (4, 3) that is perpendicular to $x = -1$. _____

38. The line through (-3, 2) that is perpendicular to $y = -4$. _____

39. The line through (-3, 0) that is perpendicular to $x + y = 5$. _____

40. The line through (-6, 0) that is perpendicular to $3x - 2y = 10$. _____