

Practice 5-7

..... *Example Exercises*

Example 1

Find the x - and y -intercept of each equation.

1. $2x + y = 4$

2. $x + 3y = 9$

3. $2x + 3y = 6$

4. $4x - 5y = 10$

Graph each equation.

5. $x + y = 5$

6. $x + 3y = -6$

7. $-5x + 3y = 15$

8. $3x - 2y = 12$

9. $-x + 4y = 8$

10. $3x + 2y = 6$

11. $-2x + 5y = 5$

12. $5x + 6y = 18$

Example 2

Graph each equation using a graphing calculator. Make a sketch of the graph. Include X_{\min} , X_{\max} , Y_{\min} , Y_{\max} , and the x - and y -intercepts.

13. $4x + 5y = 80$

14. $6x + 7y = 84$

15. $3x + 10y = 90$

16. $12x + 5y = 180$

17. $-5x + 16y = 160$

18. $8x - 6y = -192$

19. $7x - 5y = 70$

20. $9x + 7y = -126$

Example 3

21. You are buying \$60 worth of a lawn seed mixture that consists of two types of seed. One type costs \$5/lb and the other costs \$6/lb.
- Write an equation to find the amount of each seed that you can buy.
 - Graph your equation.
22. Suppose you have two summer jobs. You earn \$4/h baby-sitting and \$5/h weeding gardens. You want to earn \$100.
- Write an equation to find the time you would need to work at each job.
 - Graph your equation.
 - Use your graph to find two different combinations of hours worked.

Example 4

Write an equation for a line through the given point with the given slope using the $Ax + By = C$ form.

23. $(2, 5); m = 3$

24. $(6, 1); m = 5$

25. $(-2, 4); m = -4$

26. $(7, -5); m = 2$

27. $(-2, 7); m = \frac{1}{2}$

28. $(4, 3); m = \frac{3}{2}$

29. $(-9, 4); m = -\frac{5}{3}$

30. $(-6, -2); m = -\frac{1}{4}$