

5-5

Practice

Form K

Standard Form

Find the x - and y -intercepts of the graph of each equation.

1. $x + y = -3$ **x -intercept: -3 ;**
 y -intercept: -3

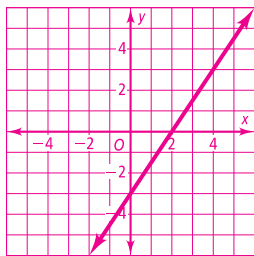
2. $2x - 4y = -8$ **x -intercept: -4 ;**
 y -intercept: 2

3. $x + 5y = -10$ **x -intercept: -10 ;**
 y -intercept: -2

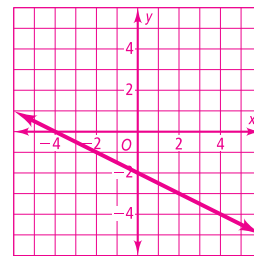
4. $-3x + 2y = 12$ **x -intercept: -4 ;**
 y -intercept: 6

Draw a line with the given intercepts.

5. x -intercept: 2
 y -intercept: -3

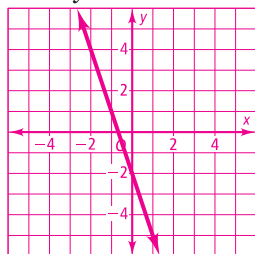


6. x -intercept: -4
 y -intercept: -2

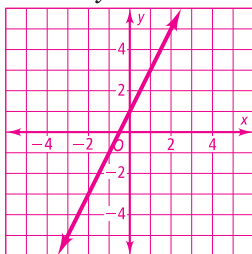


Graph each equation using x - and y -intercepts.

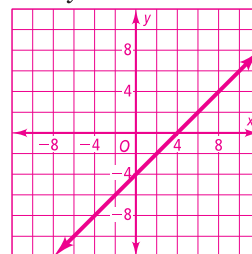
7. $3x + y = -2$



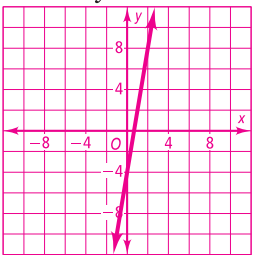
8. $-2x + y = 1$



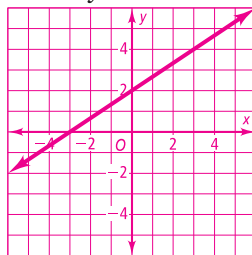
9. $x - y = 4$



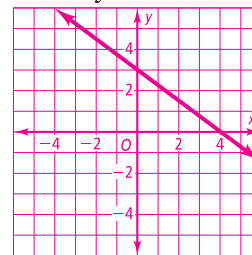
10. $-6x + y = -4$



11. $2x - 3y = -6$



12. $6x + 8y = 24$



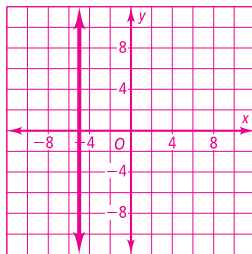
For each equation, tell whether its graph is a *horizontal* or a *vertical* line.

13. $x = -1$ **vertical**

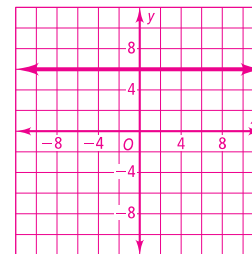
14. $y = 5$ **horizontal**

Graph each equation.

15. $x = -5$



16. $y = 6$



5-5

Practice (continued)

Form K

Standard Form

17. **Writing** Explain how $y - 2 = 2(x + 6)$ can be rewritten into standard form.

Then show your work in transforming the equation to standard form.

Simplify the parentheses and move x and y to the right side of the equation and the constants to the right side so that it is in the form $Ax + By = C$.

Steps may vary; $2x - y = -14$

Write each equation in standard form using integers.

18. $y = x + 6$ **$-x + y = 6$**

19. $y + 5 = -(x + 3)$ **$x + y = -8$**

20. $y - 1 = -\frac{1}{2}(x - 4)$ **$x + 2y = 6$**

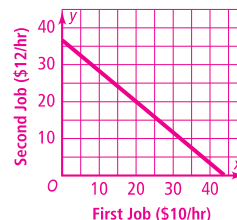
21. $y = -\frac{2}{3}x + 6$ **$2x + 3y = 18$**

22. You work two jobs. At the first job, you earn \$10 per hour. At the second job, you earn \$12 per hour. You earned \$440 last week.

Write and graph an equation that represents this situation.

What are three combinations of hours you could have worked at each job?

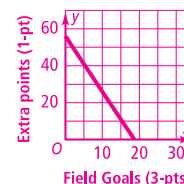
$10x + 12y = 440$ Answers may vary. Sample: 20 hours at 1st job, 20 hours at 2nd job; 44 hours at 1st job, 0 hours at 2nd job; 38 hours at 1st job, 5 hours at 2nd job.



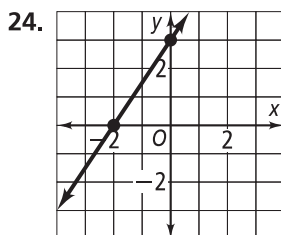
23. Mike was the kicker for the football team. He scored 56 points during the season kicking field goals (3 points) and extra points (1 point).

Write and graph an equation that represents this situation. What are three combinations of field goals x and extra points y he could have made?

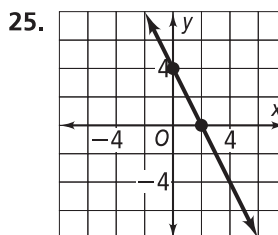
$3x + y = 56$ Answers may vary. Sample: 0 field goals, 56 extra points; 18 field goals, 2 extra points; 3 field goals, 47 extra points.



For each graph, find the x - and y -intercepts. Then write an equation in standard form using integers.



**x -intercept: -2 ; y -intercept: 3 ;
 $-3x + 2y = 6$**



**x -intercept: 2 ; y -intercept: 4 ;
 $2x + y = 4$**

Find the x - and y -intercepts of the line that passes through the given points.

26. $(2, -2), (6, -4)$

x -intercept: -2 ; y -intercept: -1

27. $(-1, -3), (4, 2)$

x -intercept: 2 ; y -intercept: -2