Lesson 5-5 **"Intercepts Method"** Name _____

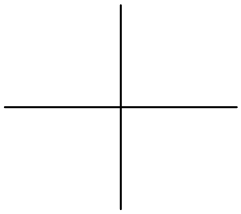
Computing the *x*- and *y*- Intercepts of a Linear Equation and **Graphing Using the Intercepts**

1. Define the *x*-intercept of a line.

2. Define the *y*-intercept of a line.

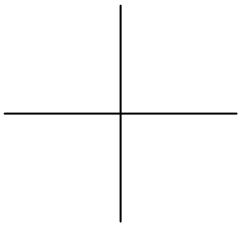
3. Draw a line on the graph and indicate the *x*-intercept.

4. Give the *x*-intercept as an ordered pair.



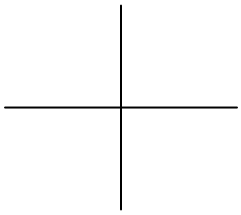
5. Draw another line on the graph and indicate the *y*-intercept.

6. Give the *y*-intercept as an ordered pair.

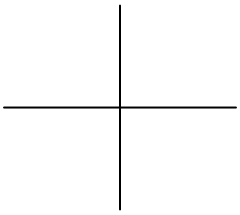


Calculate the *x*- and *y*- intercepts for the following linear equations. List the intercepts as ordered pairs. **Graph**.

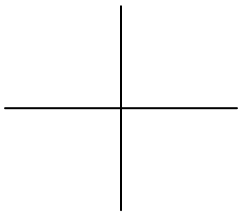
7. $5x+3y=15$



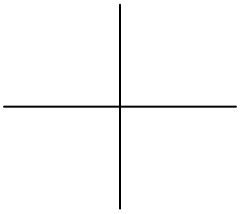
8. $7x-4y=28$



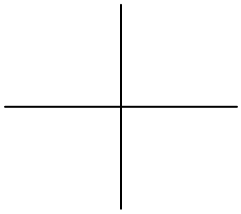
9. $-4x+3y=12$



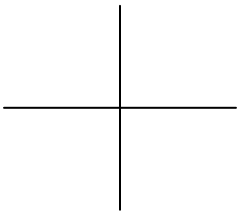
10. $-10x-30y=90$



11. $6x+3y=-12$

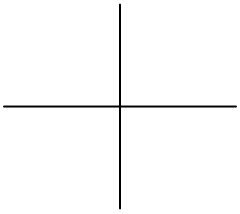


12. $-x+3y=6$

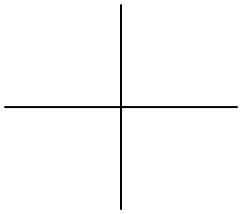


Graph each equation using the *x*- and *y*- intercepts. Show your work!

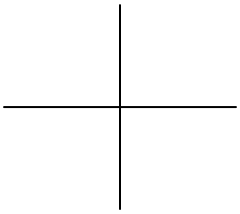
13. $9x - 6y = -36$



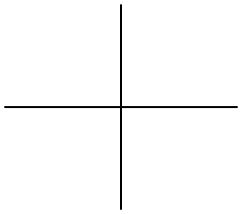
14. $-2x - 3y = -12$



15. $5x - 2y = 10$

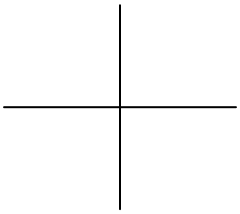


16. $-8x + 10y = 40$

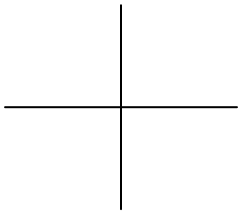


Graph a line that matches each description:

17. *y*-intercept is (0, 3) and doesn't have an *x*-intercept. (Never hits the *x*-axis.)



18. *x*-intercept is (-2, 0) and doesn't have a *y*-intercept. (Never hits the *y*-axis.)



Write an equation in of the line that passes through the given point and is **parallel** to the graph of the given equation.

19. (1, 3) y = 3x + 2

20. (1, 3) y + 2 = 4(x-1)

21. (0, 0) y = 2/3 x +1

Write an equation in of the line that passes through the given point and is **perpendicular** to the graph of the given equation.

22. (0, 0) y = -3x + 2

23. (-3, 2) x - 2y = 7

24. (5, 0) y + 1 = 2(x - 3)