CC Geometry HW#_____ Name_____
Worksheet 3-6

Period_____Column_____Date_____

Use slope-intercept form to write the equation of each line. Show work.

1. the line with slope -4 and y-intercept (0, -5)

2. the line with slope 5 that passes through (2, -5)

3. the line with x-intercept 4 and y-intercept -2

4. the line parallel to $y = -3x - 2$ that passes through (-2, 7)

Use point-slope form to write the equation for each line, but write the final equation in slope-intercept form,

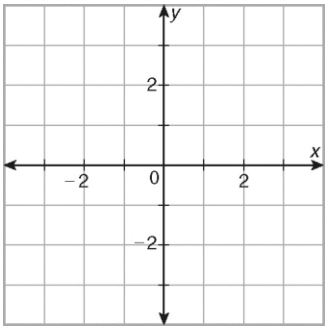
5. the line with slope -3 that passes through (-5, 2)

6. the line through (4, 6) and (-2, -5)

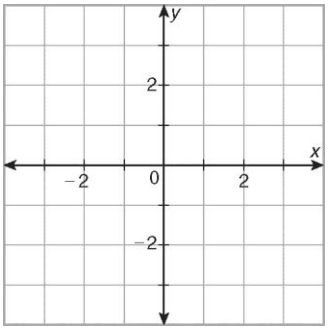
7. the line parallel to $y = \frac{2}{3}x - 7$ that passes through (6, -4)

8. the line perpendicular to $y = \frac{1}{2}x + 1$ that passes through (1, 4)

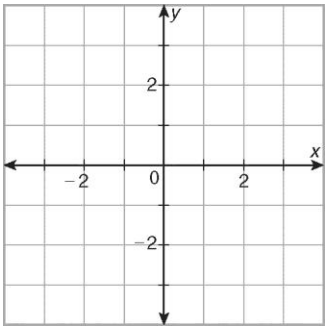
Graph each line.



9. $y + 3 = -3(x - 1)$



10. $y = -\frac{4}{3}x + 2$



11. $x = -3$

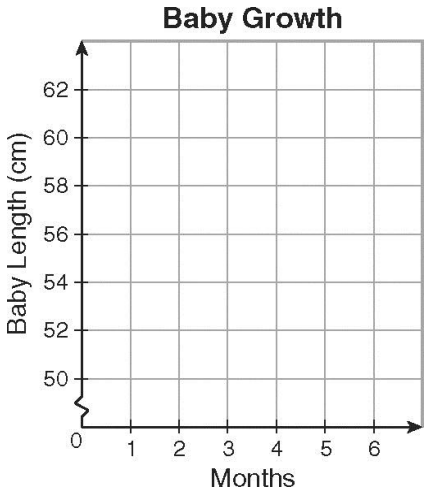
Determine whether the lines are parallel, intersect, or coincide. Give a reason for your answer. Show any work you need.

12. $y = x - 7$, $y = -x + 3$

13. $y = \frac{5}{2}x + 4$, $2y = 5x - 4$

14. $y = \frac{-1}{2}x + 3$, $x + 2y = 6$

15. Babies typically grow about 24 centimeters per year, or 2 centimeters per month, during their first year. The average length of a newborn baby is 50 centimeters. Baby A is born 50 centimeters long and grows at 2 centimeters per month. Baby B is born 52 centimeters long and grows at 1.5 centimeters per month. Graph the growth of each baby. (*Hint:* The birth length is the *y*-intercept, and the growth rate is the slope.)



16. Are the lines $y = 4x + 5$ and $y = \frac{-1}{4}x + 7$ parallel or perpendicular? Write a sentence that explains your answer.