

MAKE SURE TO KNOW HOW TO DO COORDINATE PROOFS FROM THE PREVIOUS WORK.
 Given two points that a line passes through, find the slope. Show all work.

1. (2, 3) and (5, 8)

$$\frac{5}{3}$$

2. (3, 8) and (-4, -5)

$$\frac{13}{7}$$

3. (5, -8) and (5, -2)

$$\frac{6}{0} \text{ undefined}$$

Determine whether lines AB and MN are parallel, perpendicular or neither.

4. A(1, 6), B(-1, -8), M(2, 10), N(-2, -6)

5. A(-4, -8), B(4, -6), M(-3, 5), N(-1, -3)

$$m = \frac{-14}{-2} = 7 \quad m = \frac{-16}{-4} = 4$$

$$m = \frac{2}{8} = \frac{1}{4} \quad m = \frac{-8}{2} = -4$$

neither

perpendicular

Write the equation of a line in slope intercept form given the slope and y-intercept.

6. slope = $-\frac{3}{5}$, y-intercept = 5

7. slope = 9, y-intercept = -4

$$y = -\frac{3}{5}x + 5$$

$$y = 9x - 4$$

Write the equation of a line in slope intercept form and then graph. Show all work.

8. $-10x - y = -5$

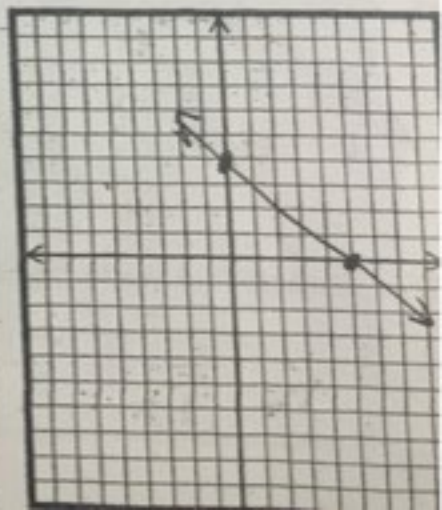
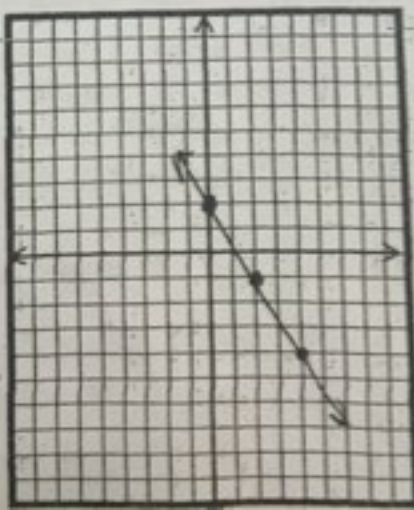
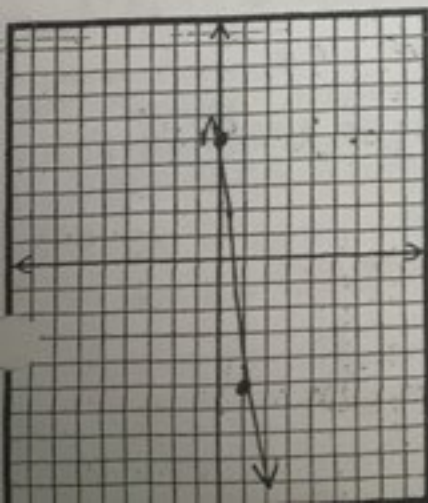
9. $-4 + 2y = -3x$

10. $4x + 5y = 20$

$$y = -10x + 5$$

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

$$y = -\frac{4}{5}x + 4$$



Write the slope intercept form of the equation of the line through the given point with the given slope. Show all work.

11. through (4, -2), slope = -1

$$y = -x + 2$$

12. through (-2, 4), slope = $-\frac{1}{7}$

$$y = -\frac{1}{7}x + \frac{26}{7}$$

$3\frac{5}{7}$

Write the slope intercept form of the equation of the line through the given points. Show all work.

13. through (-3, 2) and (0, -1)

14. through (1, 2) and (3, -4)

15. through (1, 1) and (5, -3)

$$y = -x - 1$$

or

$$y = -1x - 1$$

$$y = -3x + 5$$

$$y = -1x + 2$$

Write the slope intercept form of the equation of the line described.

16. through (2, 0), parallel to $y = \frac{3}{2}x + 2$

17. through (-2, 4), parallel to $y = -\frac{3}{2}x + 3$

$$y = \frac{3}{2}x - 3$$

$$y = -\frac{3}{2}x + 1$$

18. through (2, 4), perpendicular to $y = -\frac{2}{7}x - 5$

19. through (5, 0), perpendicular to $y = -x + 5$

$$y = \frac{7}{2}x - 3$$

$$y = x - 5$$

20. x-intercept is -3, y-intercept is 2

21. slope is 2, contains (0, -4)

$$y = \frac{2}{3}x + 2$$

$$y = 2x - 4$$