NAME key DATE _____ PERIOD ____

3-4 Practice

Equations of Lines

Write an equation in slope-intercept form of the line having the given slope and *y*-intercept.

1. m: $\frac{2}{3}$, y-intercept: -10 $y = \frac{2}{3}x - 10$

2. m: $-\frac{7}{9}$, $\left(0, -\frac{1}{2}\right)$ $y = -\frac{7}{9}x - \frac{1}{2}$

3. m: 4.5, (0, 0.25) $y = 4.5x + .25$

Write equations in point-slope form and slope-intercept form of the line having the given slope and containing the given point.

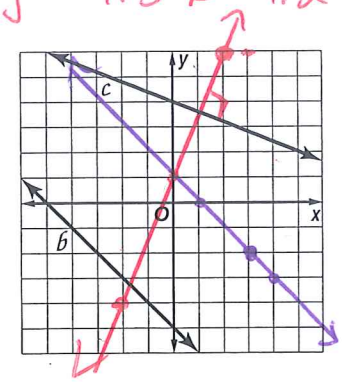
4. m: $\frac{3}{2}$, (4, 6) $y - 6 = \frac{3}{2}(x - 4)$ $y = \frac{3}{2}x$

5. m: $-\frac{6}{5}$, $(-5, -2)$ $y + 2 = -\frac{6}{5}(x + 5)$ $y = -\frac{6}{5}x - 8$

6. m: 0.5, (7, −3) $y + 3 = .5(x - 7)$ $y = .5x - 6.5$

7. m: −1.3, (−4, 4) $y - 4 = -1.3(x + 4)$ $y = -1.3x - 1.2$

Write an equation in slope-intercept form for each line.



8. b $y = -x - 5$

9. c $y = -\frac{2}{5}x + 4$

10. parallel to line b, contains (3, −2) $y = -x + 1$

11. perpendicular to line c, contains (−2, −4) $y = \frac{5}{2}x + 1$

Write an equation in slope-intercept form for the line that satisfies the given conditions.

12. $m = -\frac{4}{9}$, y-intercept = 2 $y = -\frac{4}{9}x + 2$

13. $m = 3$, contains (2, −3) $y = 3x - 9$

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

15. x-intercept is 2, y-intercept is −5 $y = \frac{5}{2}x - 5$

16. passes through (2, −4) and (5, 8) $y = 4x - 12$

17. contains (−4, 2) and (8, −1) $y = -\frac{1}{4}x + 1$

18. COMMUNITY EDUCATION A local community center offers self-defense classes for teens. A $25 enrollment fee covers supplies and materials and open classes cost $10 each. Write an equation to represent the total cost of x self-defense classes at the community center.

$C = 10x + 25$