3-4 Equations of Lines Skills Practice

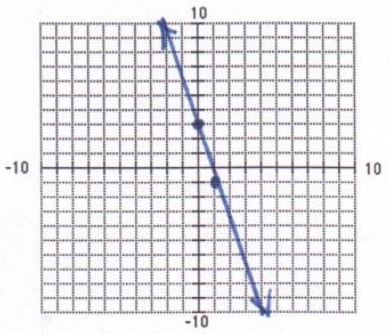
Name Master E

Date _____ Block ____

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

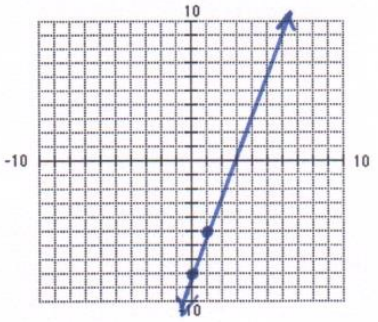
1. m: -4, b: 3

$y = -4x + 3$



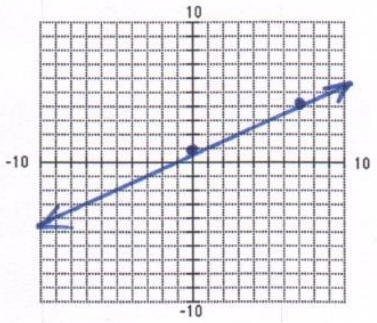
2. m: 3, b: -8

$y = 3x - 8$



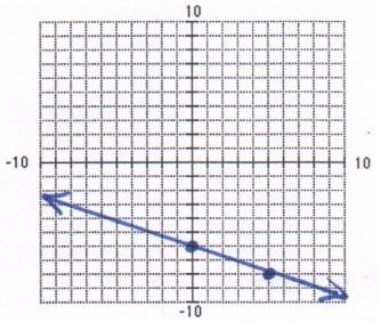
3. m: $\frac{3}{7}$, (0, 1)

$y = \frac{3}{7}x + 1$



4. m: $-\frac{2}{5}$, (0, -6)

$y = -\frac{2}{5}x - 6$

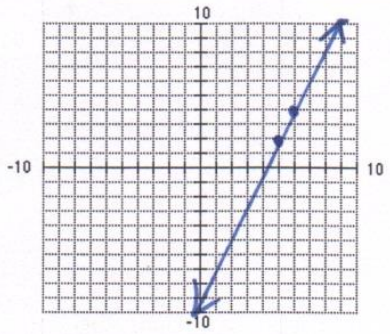


Write equations in point-slope form of the line having the given slope that contains the given point. Then graph the line.

5. $m = 2$, (5, 2)

$y - 2 = 2(x - 5)$

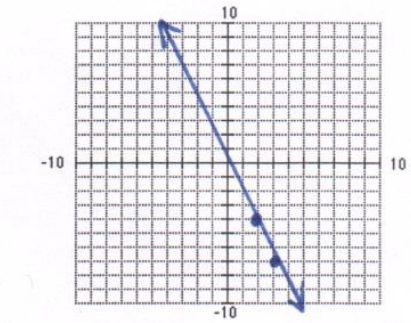
$y = 2 + 2(x - 5)$



6. $m = -3$, (2, -4)

$y + 4 = -3(x - 2)$

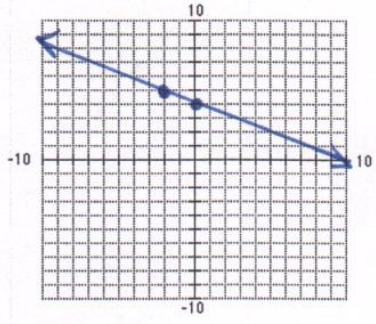
$y = -4 + -3(x - 2)$



7. $m = -\frac{1}{2}$, (-2, 5)

$y - 5 = \frac{1}{2}(x + 2)$

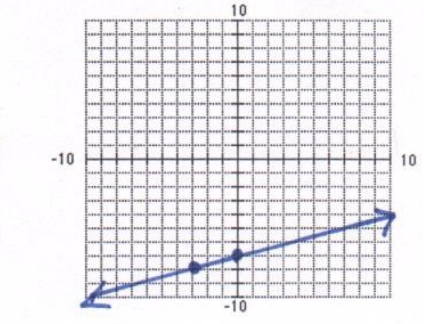
$y = 5 - \frac{1}{2}(x + 2)$



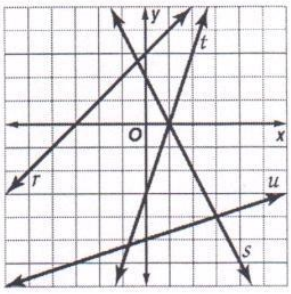
8. $m = \frac{1}{3}$, (-3, -8)

$y + 8 = \frac{1}{3}(x + 3)$

$y = -8 + \frac{1}{3}(x + 3)$



9-14: Use the graph to write an equation in slope-intercept form for each line shown or described.



9. r $y = x + 3$

10. s $y = -2x + 2$

11. t $y = 3x - 3$

12. u $y = \frac{1}{3}x - 5$

13. the line parallel to line r and contains (1, –1)

$m = 1$

$y + 1 = 1(x - 1)$

$y + 1 = x - 1$

$y = x - 2$

14. the line perpendicular to line s and contains (0, 0)

$m = \frac{1}{2}$

$y - 0 = \frac{1}{2}(x - 0)$

$y = \frac{1}{2}x$

15-20: Write an equation in slope-intercept form for each line described.

15. $m = 6$, $b = -2$

$y = 6x - 2$

16. $m = -\frac{5}{3}$, $b = 0$

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

17. $m = -1$, contains (0, –6)

$y = -x - 6$

18. $m = 4$, contains (2, 5)

$y - 5 = 4(x - 2)$

$y - 5 = 4x - 8$

$y = 4x - 3$

19. contains (2, 0) and (0, 10) y-intercept!

$m = \frac{10 - 0}{0 - 2} = \frac{10}{-2} = -5$

$y = -5x + 10$

20. x-intercept is –2, y-intercept is –1

(–2, 0) (0, –1)

$m = \frac{-1 - 0}{0 - (-2)} = \frac{-1}{2}$

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