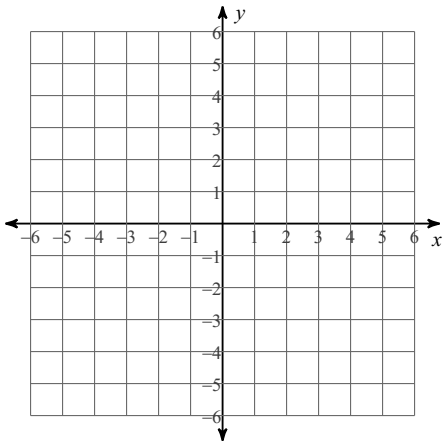
Algebra II Honors - Mr. Allen-Black Name_____

Basics of Linear Functions - 2020

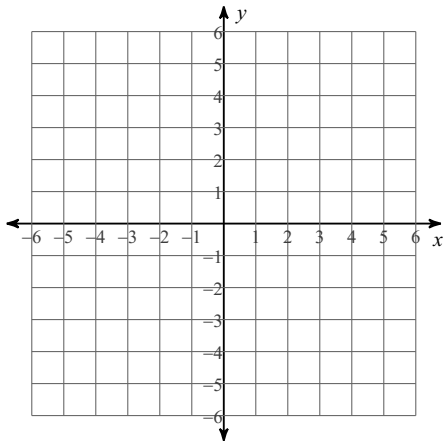
Date_____ Period____

CLASS EXAMPLES: Sketch the graph of each line.

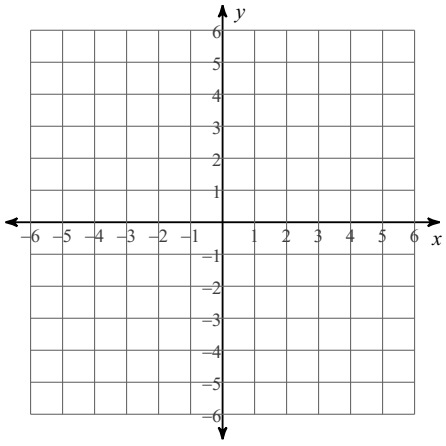
1) $y = \frac{8}{3}x - 4$



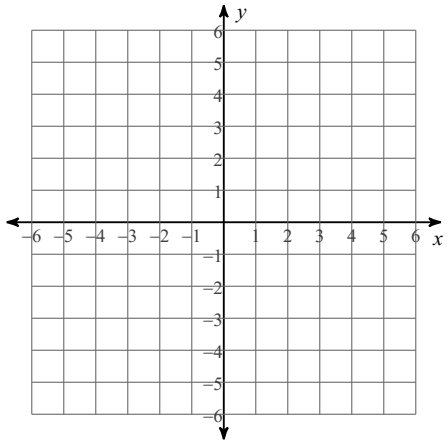
2) $y = -\frac{7}{2}x - 5$



3) $5x + 2y = 0$

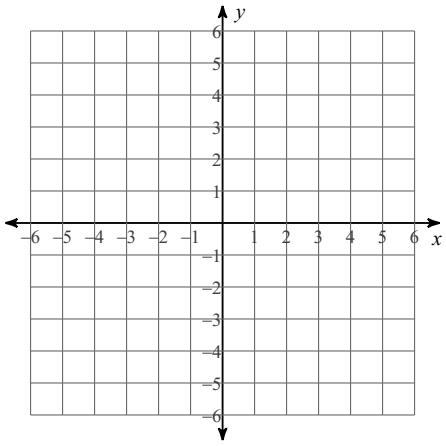


4) $3x - 4y = 8$

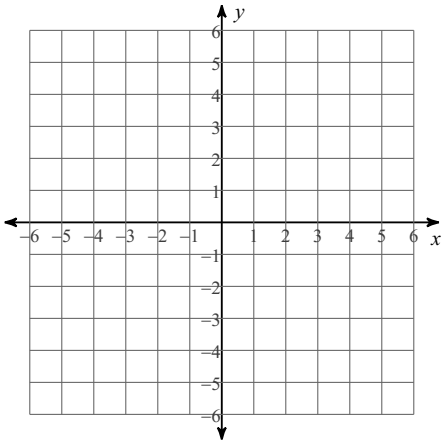


Sketch the graph of each line.

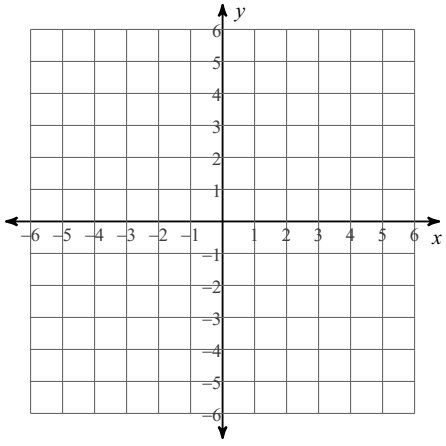
5) $y = \frac{5}{4}x - 5$



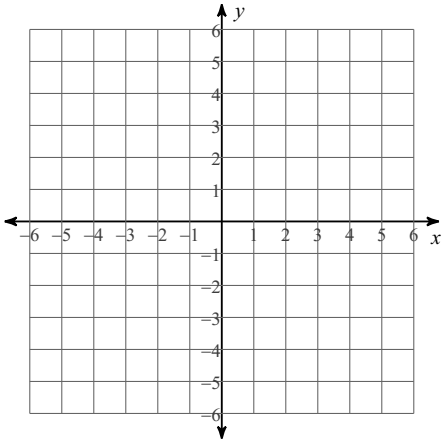
6) $y = -4x + 2$



7) $x + 5y = 20$

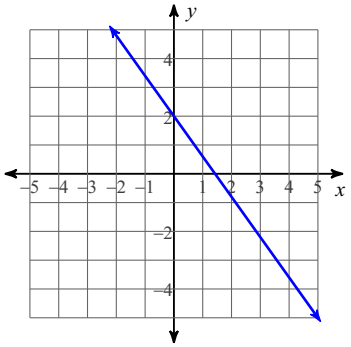


8) $2x - 3y = 6$



CLASS EXAMPLES: Write the slope-intercept form of the equation of each line.

9)



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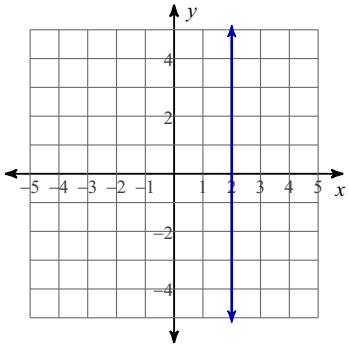
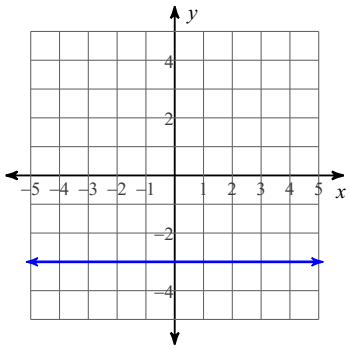


Write the slope-intercept form of the equation of each line.

11)



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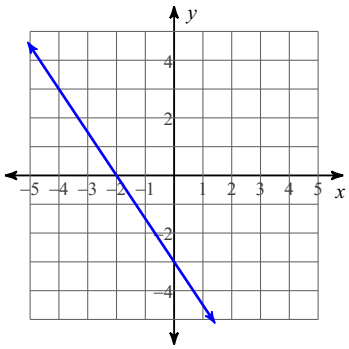


CLASS EXAMPLE: Write the slope-intercept form of the equation of each line given the slope and y-intercept.

13) Slope $= \frac{2}{3}$, y-intercept = 5

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

14) Slope = 1, y-intercept = –2

15) Slope = $-\frac{5}{3}$, y-intercept = 3

CLASS EXAMPLES: Write the point-slope form of the equation of the line through the given point with the given slope.

16) through: $(-4, -2)$, slope = $\frac{7}{4}$

17) through: $(1, -3)$, slope = $\frac{1}{6}$

Write the point-slope form of the equation of the line through the given point with the given slope.

18) through: $(5, -2)$, slope = $\frac{2}{5}$

19) through: $(-2, -1)$, slope = 2

CLASS EXAMPLES: Write the slope-intercept form of the equation of the line through the given point with the given slope.

20) through: $(1, 3)$, slope = 7

21) through: $(-4, 0)$, slope = –1

Write the slope-intercept form of the equation of the line through the given point with the given slope.

22) through: $(-1, -5)$, slope = 3

23) through: $(-2, -5)$, slope = 5

CLASS EXAMPLES: Write the point-slope form of the equation of the line through the given points.

24) through: $(0, -5)$ and $(-5, 2)$

25) through: $(0, 2)$ and $(-4, 3)$

Write the point-slope form of the equation of the line through the given points.

26) through: $(2, 1)$ and $(5, 4)$

27) through: $(-1, 1)$ and $(-5, 0)$

CLASS EXAMPLES: Write the slope-intercept form of the equation of the line through the given points.

28) through: $(-1, -4)$ and $(-2, -4)$

29) through: $(0, 3)$ and $(-5, -2)$

Write the slope-intercept form of the equation of the line through the given points.

30) through: $(3, -2)$ and $(-3, 2)$

31) through: $(-5, -3)$ and $(-3, 1)$

CLASS EXAMPLES: Write the point-slope form of the equation of the line described.

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

33) through: $(-2, -5)$, perp. to $y = -\frac{3}{7}x - 2$

Write the point-slope form of the equation of the line described.

34) through: $(2, -4)$, parallel to $y = -\frac{1}{2}x + 5$

35) through: $(-2, 3)$, perp. to $y = \frac{3}{2}x + 4$

CLASS EXAMPLES: Write the slope-intercept form of the equation of the line described.

36) through: $(1, 4)$, parallel to $y = 8x + 3$

37) through: $(4, -4)$, perp. to $y = 4x - 4$

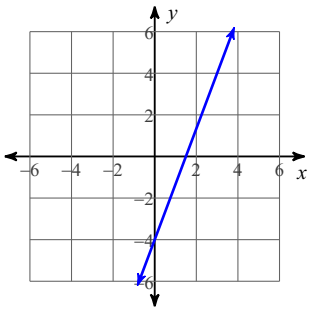
Write the slope-intercept form of the equation of the line described.

38) through: $(1, -3)$, parallel to $y = -8x + 3$

39) through: $(-5, 4)$, perp. to $y = -5x + 4$

Answers to Basics of Linear Functions - 2020

1)



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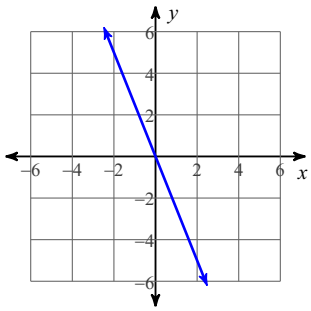

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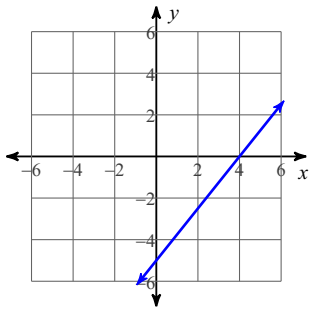

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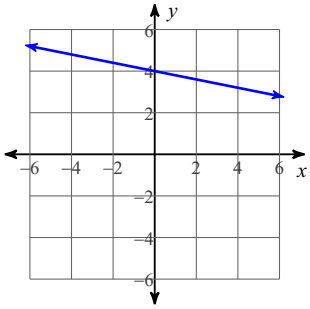

9) $y = -\frac{7}{5}x + 2$

11) $y = -3$

13) $y = \frac{2}{3}x + 5$

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

17) $y + 3 = \frac{1}{6}(x - 1)$

19) $y + 1 = 2(x + 2)$

21) $y = -x - 4$

23) $y = 5x + 5$

25) $y - 2 = -\frac{1}{4}x$

27) $y - 1 = \frac{1}{4}(x + 1)$

29) $y = x + 3$

31) $y = 2x + 7$

33) $y + 5 = \frac{7}{3}(x + 2)$

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

37) $y = -\frac{1}{4}x - 3$

39) $y = \frac{1}{5}x + 5$