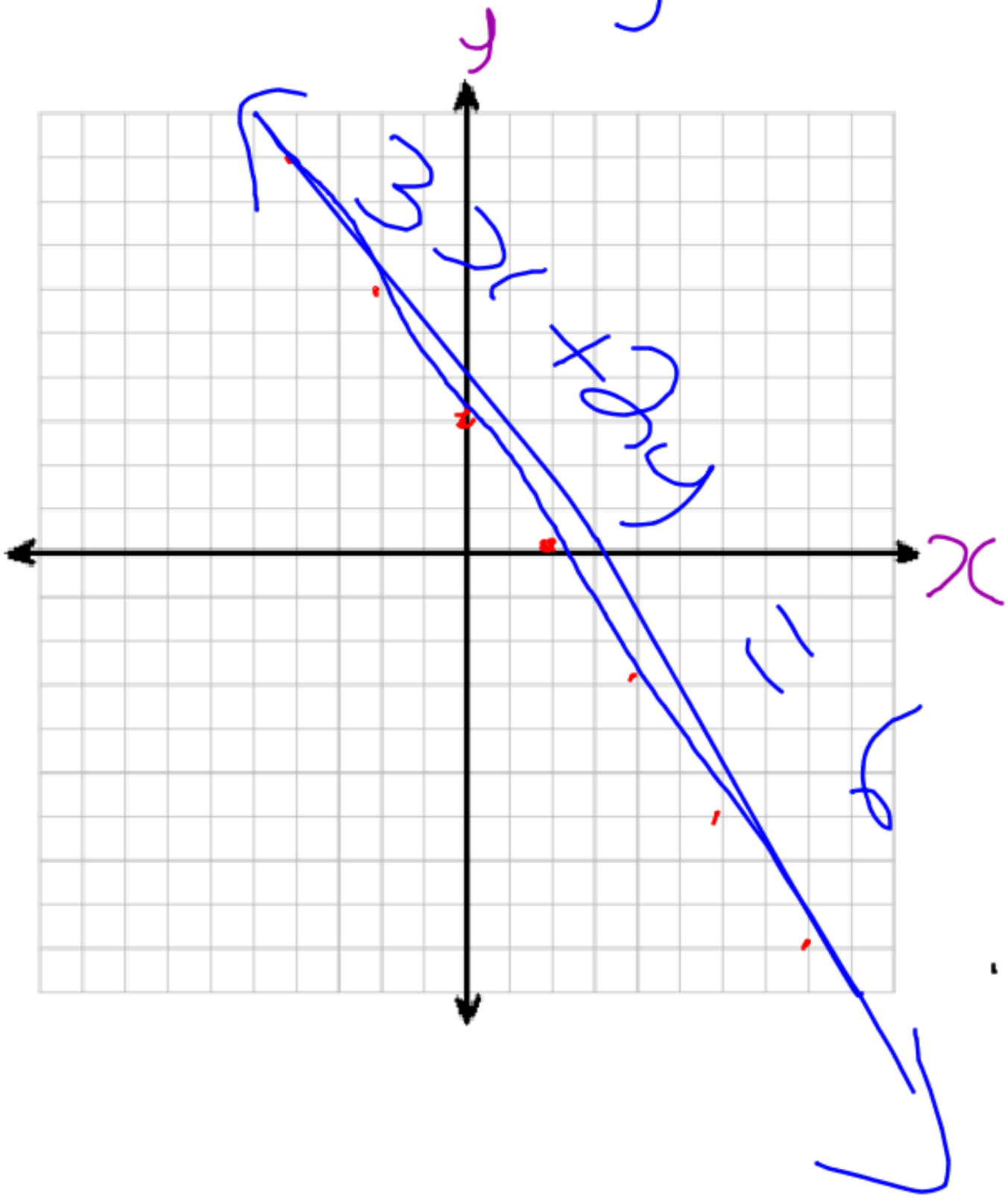
p.432

$3x + 2y = 6$

x	y
2	0
0	3



to find the x-intercept

$y = 0$

$3x + 2y = 6$

$3x + 2(0) = 6$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

∴ the x-intercept is $(2, 0)$

to find y-intercept, $x = 0$

$$3x + 2y = 6$$

$$3(0) + 2y = 6$$

$$\frac{2y}{2} = \frac{6}{2}$$

$$y = 3$$

$\therefore$ the y-intercept is $(0, 3)$

p.428

Practice

A

Find the slope and y-intercept of each line.

1. $y = 3x + 1$
2. $y = \frac{1}{2}x - 2$
3. $y = -4x + 3$
4. $x + y = 5$
5. $x + y - 7 = 0$
6. $y + 4 = 5x$
7. $y - 2x = 0$
8. $y = 3$

Find the slope and y-intercept of each line.

9. $4x + 2y = 3$
10. $x - y = 4$
11. $3x + 2y + 6 = 0$
12. $2y + 6 = 0$
13. $x - 3y - 9 = 0$
14. $5x + 2y = 10$
15. $22x + 0.5y - 1 = 0$
16. $0 = x - 2y - 4$
17. $6.4x = 0.8y$
18. $1.2x - 0.3y = 0.12$

Find the slope and y-intercept of the line through the given points.

19. (1, 3) and (3, 5)
20. (2, 3) and (−1, 6)
21. (−7, −2) and (−1, −8)
22. (−1, −2) and (−5, −10)
23. (2, 1) and (6, 4)
24. (−1, 2) and (3, 4)
25. (6, 9) and (−2, −5)
26. (4, −5) and (−2, 3)

Given the slope and y-intercept, write an equation of the line in the slope and y-intercept form. Then, write the equation in standard form.

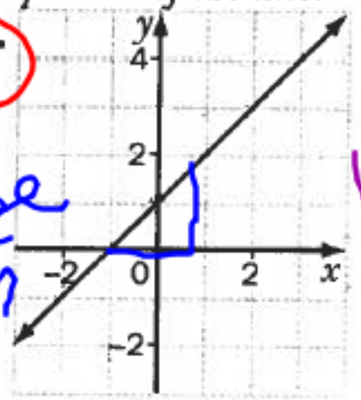
27. $m = 2; b = 3$
28. $m = 3; b = -2$
29. $m = -4; b = 6$
30. $m = -5; b = -7$
31. $m = \frac{1}{2}; b = 1$
32. $m = \frac{2}{3}; b = -2$
33. $m = -0.5; b = 0$
34. $m = -\frac{2}{5}; b = -\frac{1}{3}$

Write an equation for each of the following lines

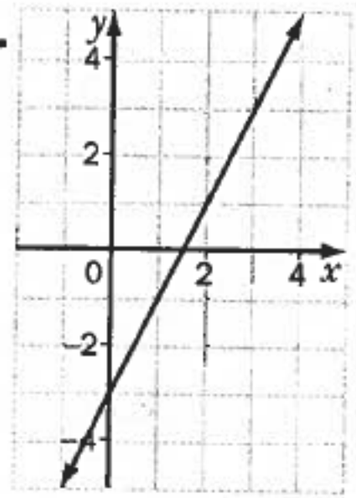
June 4

Find the slope and y-intercept of each line. Then, write an equation of the line.

49.



50.



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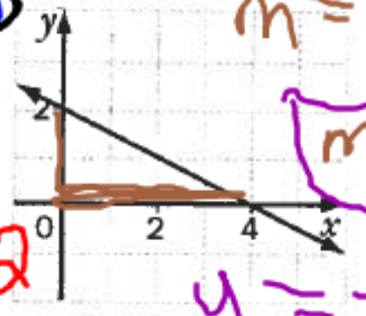

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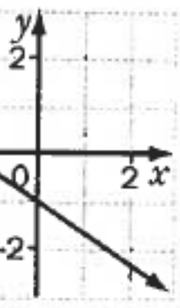

Applications and Problem Solving

B

53. **Algebra** An equation of a line is $y = 2x + b$. Find the value of b if the line passes through the point
a) (4, 2) **b)** (−3, 5) **c)** (2, −6) **d)** (−1, −3)

54. **Algebra** An equation of a line is $y = mx + 3$. Find the value of m if the line passes through the point
a) (2, 1) **b)** (−4, 5) **c)** (4, −5) **d)** (−1, −6)

55. Explain why these lines belong to a family.

55.

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

$-2x \qquad -2x - 1$

$2x + y + 1 = 0 \Rightarrow y = -2x - 1$

$+2y \qquad +2y$

$3x - 2y - 2 = 0$

$y + 1 = 0 \qquad -\frac{3x}{2} - \frac{2}{2} = \frac{2y}{2}$

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

P. 432 Methods of Graphing

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54b)

$y = mx + 3$

$(-4, 5)$

x, y

$5 = m(-4) + 3$

$-3 \quad -3$

$2 = -4m$

$\frac{2}{-4} = \frac{-4m}{-4}$

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

34) $y = mx + 3$ (x, y) $(4, -5)$

$-5 = m(4) + 3$

$-5 = 4m + 3$

$-3 \quad -3$

$-8 = 4m$

$\frac{-8}{4} = \frac{4m}{4}$

$-2 = m$

53a1 $y = 2x + b$

x	y
4	21

$21 = 2(4) + b$

$-8 \quad -8$

$2^{-8} = 8^{-8} + b$

$-6 = b$

53d1

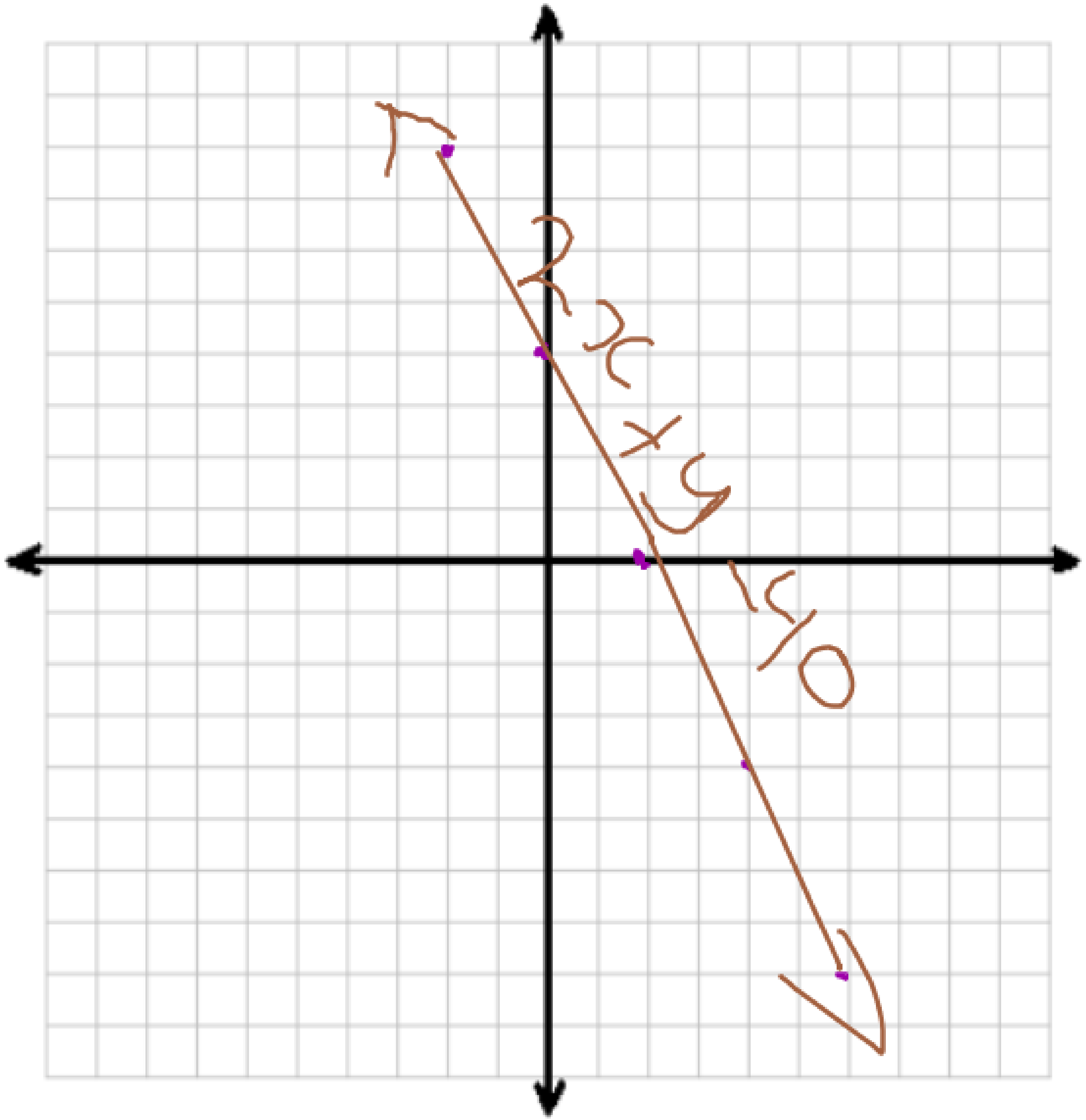
x	y
-1	-3

$-3 = 2(-1) + b$

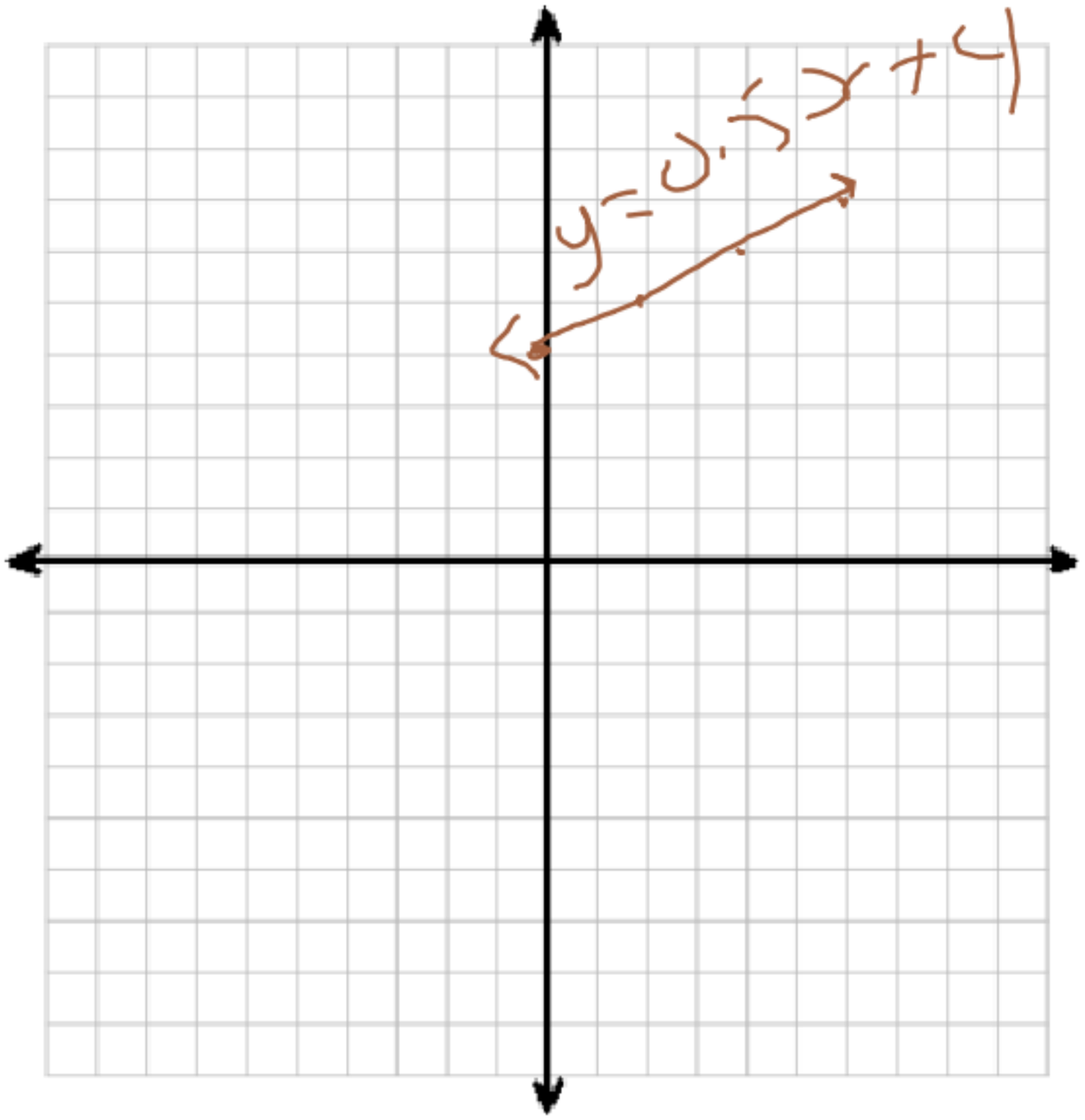
$+2 \quad +2$

$-3^{+2} = -2^{+2} + b$

$b = -1$


2x+y=4

10



$y = 0.5x + 4$

$m = 0.5$

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

$b = 4$

P. 432 2, 3, 6, 9, 11

Review package

Skip 25-30

test next day