

A # 19 1 p. 247-248 # 1-5, 11-15 odd, 23-26, 32-36
 For # 23-26, sketch the graph using slope.

Key

2 p. 250 Quiz # 1-9
 For # 4-9, (1) Identify slope and y-intercept.
 (2) sketch the graph using slope.

1 p. 247-248 # 1-5, 11-15 odd, 23-26, 32-36

1. Two lines in the same plane are parallel if they do not intersect.

2. Slope-Intercept Form: $y = mx + b$

① m is the slope

② b is the y-coordinate of the y-intercept

3. $y = 2x + 1$ $m = 2$ y-int: (0, 1)

4. $y = -x$ $m = -1$ y-int: (0, 0)

5. $y = 6 - 3x$
 $y = -3x + 6$ $m = -3$ y-int: (0, 6)

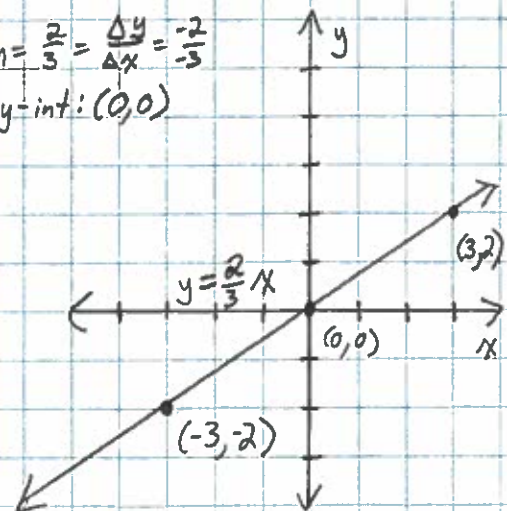
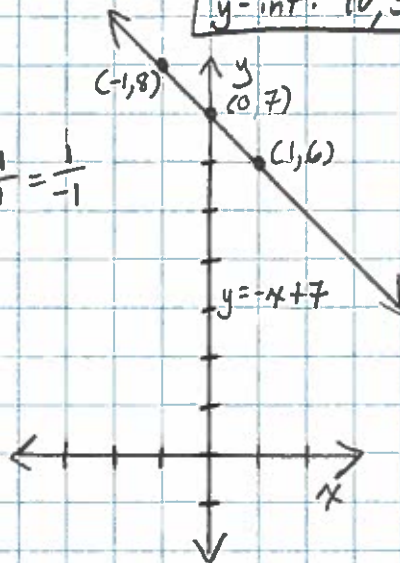
11. $4x + y = 1$
 $\begin{array}{r} 4x + y = 1 \\ +(-4x) \quad +(-4x) \\ \hline y = -4x + 1 \end{array}$
 $m = -4$
y-int: (0, 1)

13. $6x - 3y = -9$
 $\begin{array}{r} 6x - 3y = -9 \\ +(-6x) \quad +(-6x) \\ \hline -3y = -6x + (-9) \\ \hline y = 2x + 3 \end{array}$
 $m = 2$
y-int: (0, 3)

15. $2x + 5y = -10$
 $\begin{array}{r} 2x + 5y = -10 \\ +(-2x) \quad +(-2x) \\ \hline 5y = -2x + (-10) \\ \hline y = -\frac{2}{5}x + (-2) \end{array}$
 $m = -\frac{2}{5}$
y-int: (0, -2)

23. $y = -x + 7$
 $m = -1 = \frac{\Delta y}{\Delta x} = \frac{-1}{1} = -1$
 y-int: (0, 7)

24. $y = \frac{2}{3}x$
 $m = \frac{2}{3} = \frac{\Delta y}{\Delta x} = \frac{2}{3}$
 y-int: (0, 0)

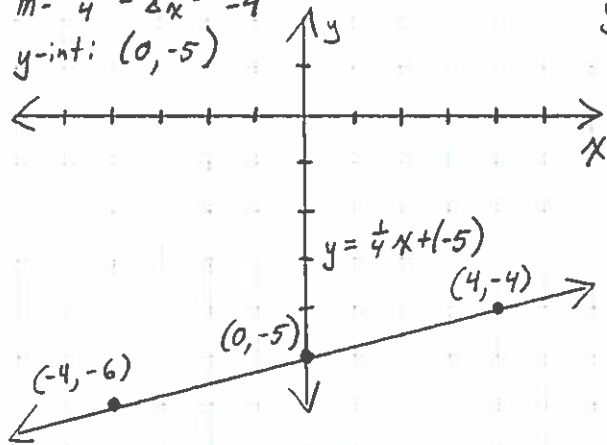


A #19 Continued

Continued #25-26, 32-36

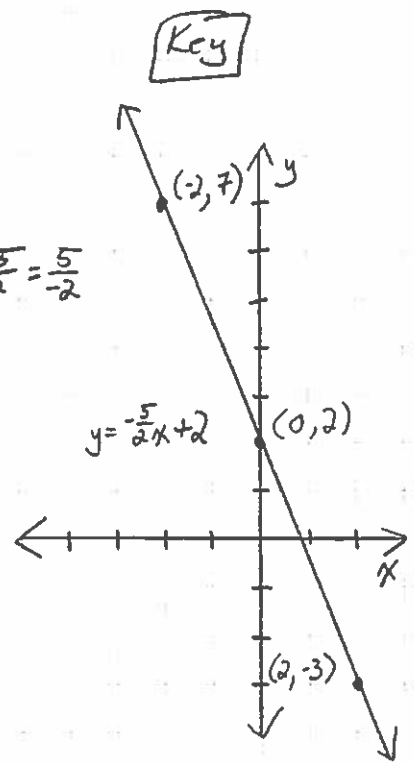
25. $y = \frac{1}{4}x - 5$
 $y = \frac{1}{4}x + (-5)$

$m = \frac{1}{4} = \frac{\Delta y}{\Delta x} = \frac{1}{4}$
 y-int: $(0, -5)$



26. $y = -\frac{5}{2}x + 2$

$m = -\frac{5}{2} = \frac{\Delta y}{\Delta x} = -\frac{5}{2} = -\frac{5}{2}$
 y-int: $(0, 2)$



32. $y = 5x - 7$ and $5x + y = 7$
 $m = 5$ $+(-5x)$ $+(-5x)$
 Different slope
 $y = -5x + 7$
 $m = -5$
 ↪ **Not Parallel**

33. $y = 3x + 2$ and $-7 + 3x = y$
 $m = 3$ $y = 3x + (-7)$
 Same slope
 ↪ **Parallel**

34. $y = -0.5x$ and $x + 2y = 18$
 $y = -\frac{1}{2}x$ $2y = -x + 18$
 $m = -\frac{1}{2}$ $y = -\frac{1}{2}x + 9$
 $m = -\frac{1}{2}$
 Same slope
 ↪ **Parallel**

35. $4x + y = 3$ and $x + 4y = 3$
 $y = -4x + 3$ $4y = -x + 3$
 $m = -4$ $y = -\frac{1}{4}x + \frac{3}{4}$
 Different slope
 ↪ **Not Parallel**

36. $6x + y = 24$ [Find a Parallel line]
 $+(-6x)$ $+(-6x)$
 $y = -6x + 24$ $m = -6$

Sample Answer: **$y = -6x + 10$** $m = -6$

Since the slopes are the same,
 the lines are parallel.

A # 19 continued

Key

2 p. 250 Quiz # 1-9

1. (3, -11) and (0, 4)

$$m = \frac{\Delta y}{\Delta x} = \frac{-11-4}{3-0} = \frac{-15}{3}$$

$m = -5$ Decreasing Line

2. (2, 1) and (8, 4)

$$m = \frac{\Delta y}{\Delta x} = \frac{1-4}{2-8} = \frac{-3}{-6}$$

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

3. (-4, -1) and (-1, -1)

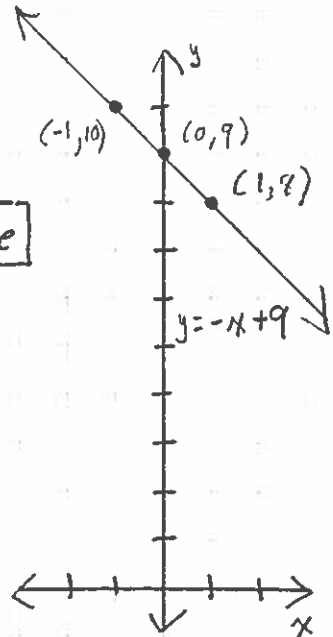
$$m = \frac{\Delta y}{\Delta x} = \frac{-1-(-1)}{-4-(-1)} = \frac{0}{-3}$$

$m = 0$ Horizontal Line

4. $y = -x + 9$

$$m = -1 = \frac{\Delta y}{\Delta x} = \frac{-1}{1} = -1$$

y-int: (0, 9)



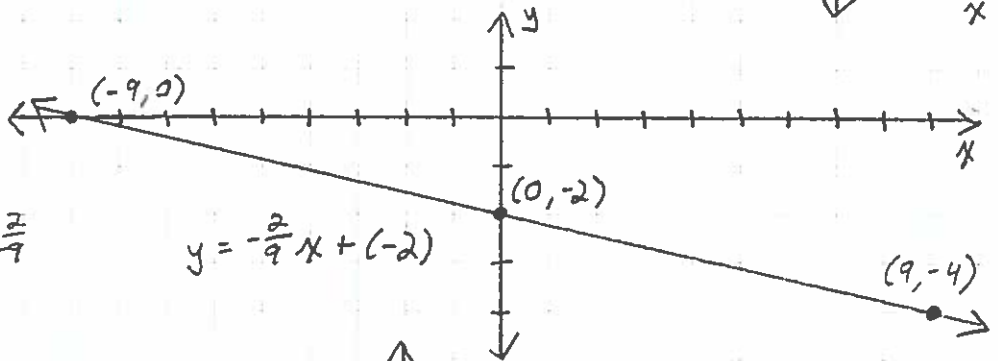
5. $2x + 9y = -18$

$$9y = -2x + (-18)$$

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

$$m = -\frac{2}{9} = \frac{\Delta y}{\Delta x} = \frac{-2}{9} = -\frac{2}{9}$$

y-int: (0, -2)



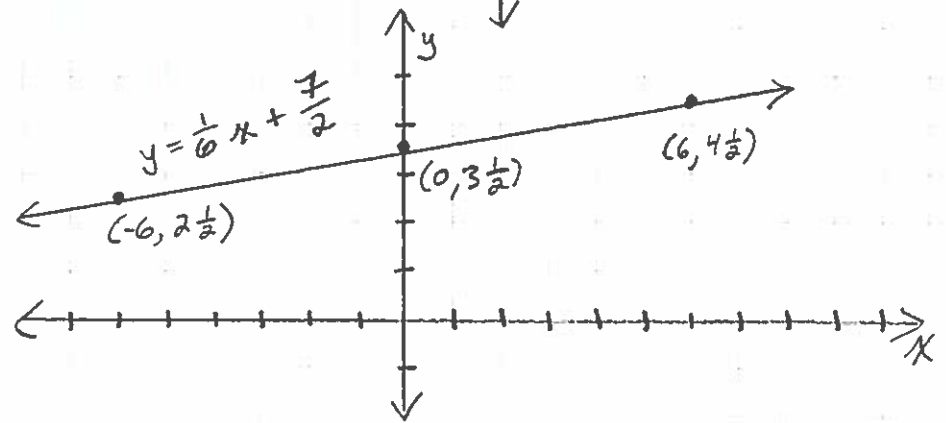
6. $-x + 6y = 21$

$$6y = x + 21$$

$$y = \frac{1}{6}x + \frac{7}{2}$$

$$m = \frac{1}{6} = \frac{\Delta y}{\Delta x} = \frac{1}{6}$$

y-int: (0, 3 1/2)

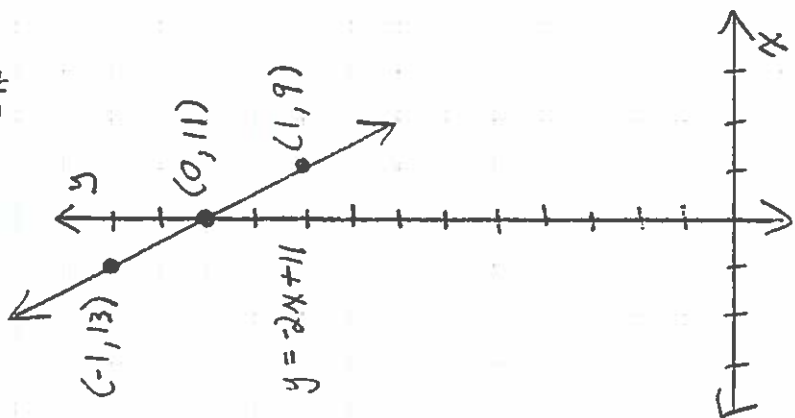


7. $y = -2x + 11$

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

y-int: (0, 11)

Turned 90°

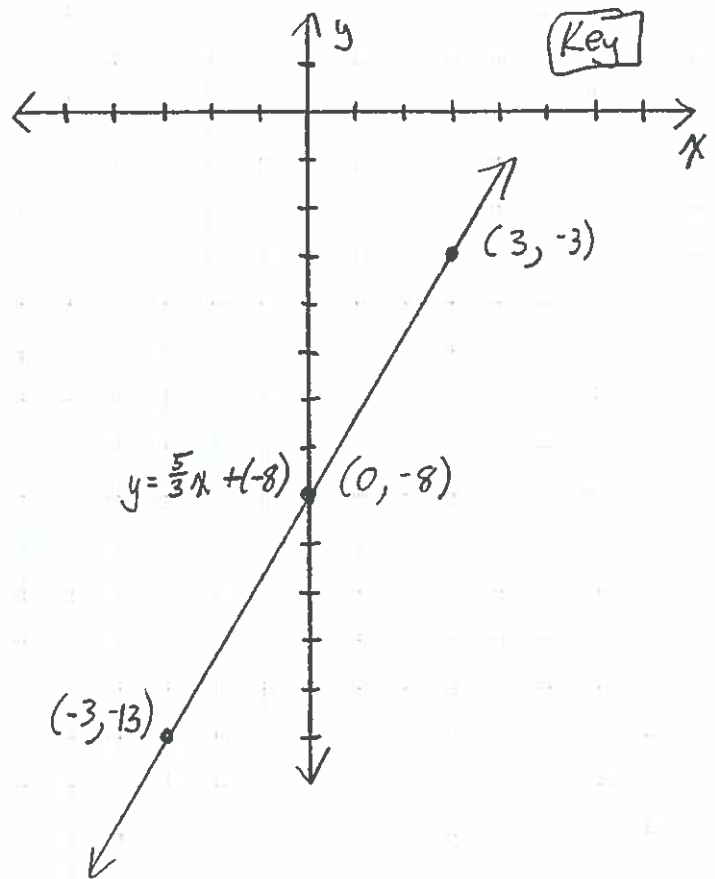


A # 19 Continued
□ continued # 8, 9

8. $y = \frac{5}{3}x - 8$

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

y-int: $(0, -8)$



9. $-3x - 4y = -12$
 $-4y = 3x + (-12)$
 $y = -\frac{3}{4}x + 3$

$$m = -\frac{3}{4} = \frac{\Delta y}{\Delta x} = \frac{-3}{4} = \frac{3}{-4}$$

y-int: $(0, 3)$

