

Solve each equation.

1) $34 = -4k - 2$

2) $27 = -9 - 4k$

3) $-5 - 2x = 33$

4) $-6(x + 10) = -78$

5) $-5(n - 7) = 135$

6) $27 = 3(-9 + n)$

7) $-270 = 5(-5 + 7b)$

8) $-5v + 33 = -7(1 - 5v)$

Solve each proportion.

9) $\frac{10}{9} = \frac{4}{10n}$

10) $\frac{p}{7} = \frac{8}{2}$

11) $\frac{3}{4} = \frac{v - 2}{10}$

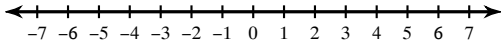
12) $\frac{n + 1}{9} = \frac{2}{4}$

13) $\frac{5}{r} = \frac{9}{r - 10}$

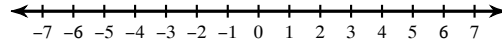
14) $\frac{5}{p} = \frac{9}{p + 10}$

Draw a graph for each inequality.

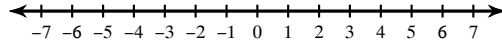
15) $x > 3$



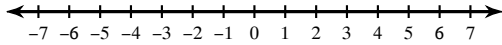
16) $x \leq -6$



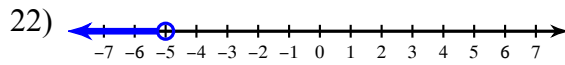
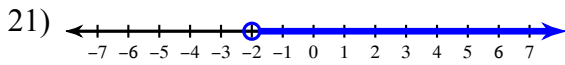
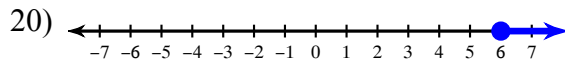
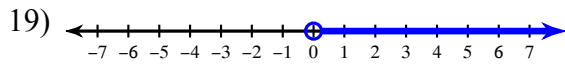
17) $v \leq 0$



18) $v > -2$

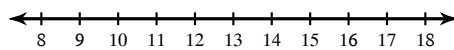


Write an inequality for each graph.

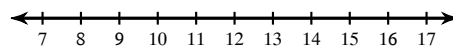


Solve each inequality and graph its solution.

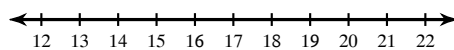
23) $\frac{a}{2} + 7 < 15$



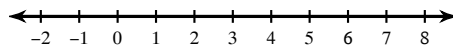
24) $1 \geq \frac{-1 + x}{10}$



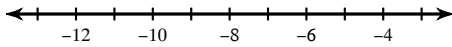
25) $\frac{x}{3} + 8 < 13$



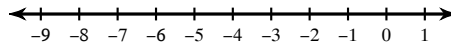
26) $8(6x - 6) \geq 240$



27) $152 \geq 8(7 - 2x)$

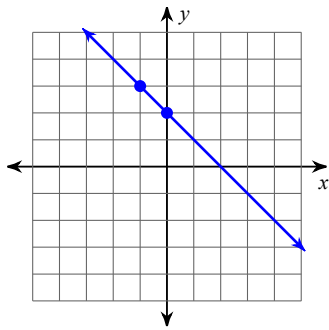


28) $-25 - 6k \leq -2(1 - 7k) + 3k$

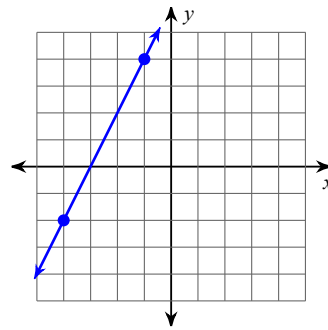


Find the slope of each line.

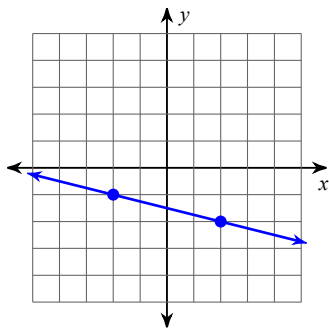
29)



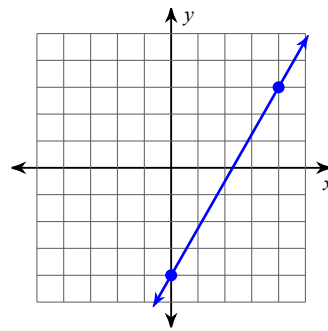
30)



31)



32)



Find the slope of the line through each pair of points.

33) $(16, -20), (1, 14)$

34) $(16, 10), (9, -18)$

35) $(8, -6), (17, -20)$

36) $(-19, 16), (-20, 10)$

Find the slope of each line.

37) $y = \frac{4}{3}x - 2$

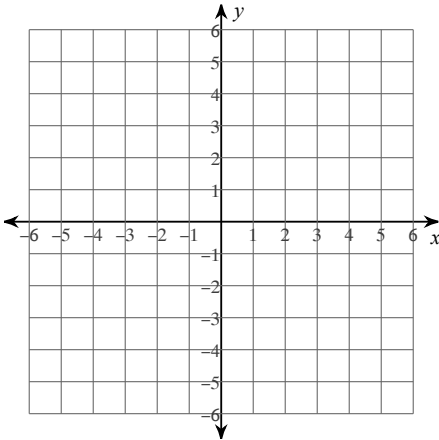
38) $x = -3$

39) $y = \frac{7}{2}x + 2$

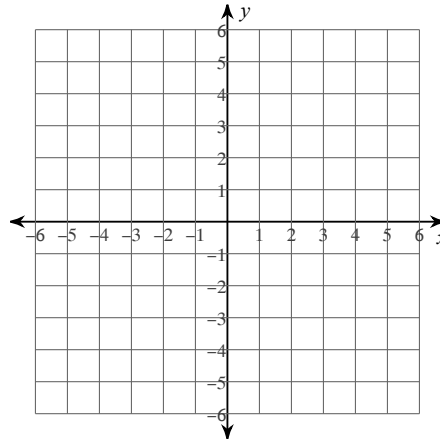
40) $y = \frac{5}{2}x - 4$

Sketch the graph of each line.

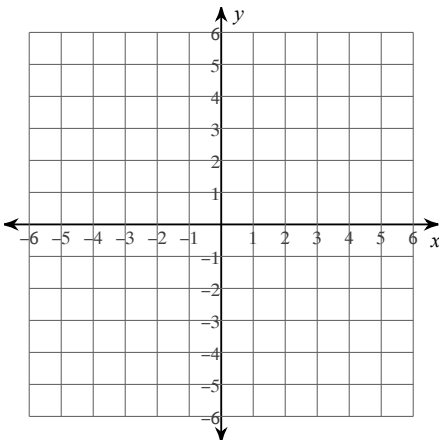
41) x -intercept = 3, y -intercept = -3



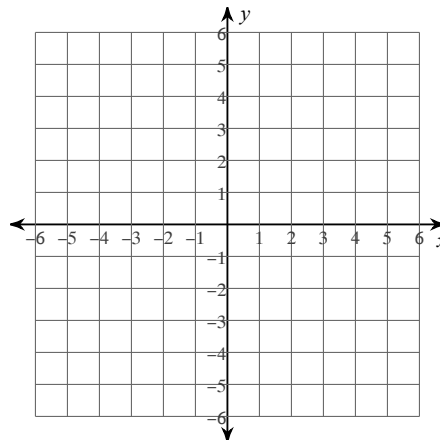
42) x -intercept = 4, y -intercept = -1



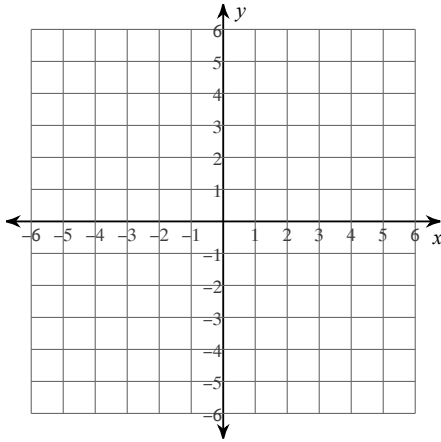
43) $y = \frac{7}{2}x - 5$



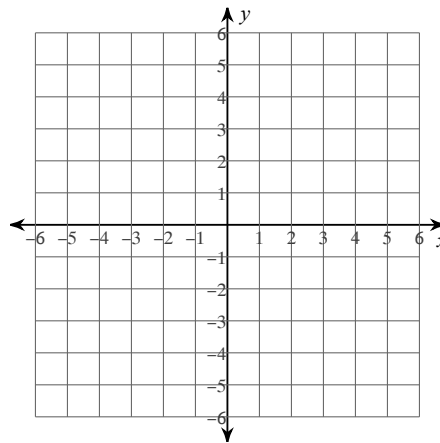
44) $y = \frac{1}{2}x + 2$



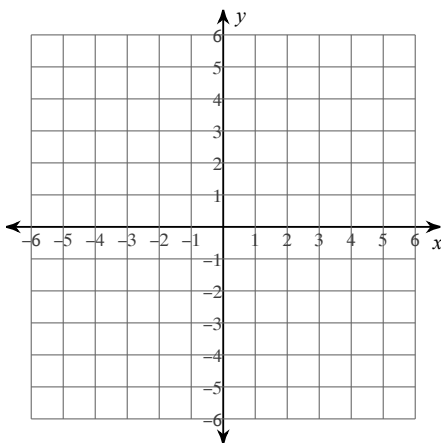
45) $y = \frac{1}{4}x + 2$



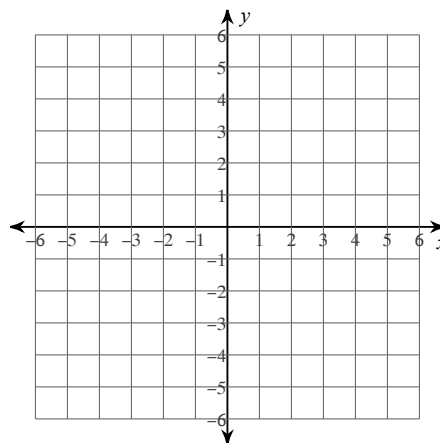
46) $y = -x - 2$



47) $3x - 4y = -4$

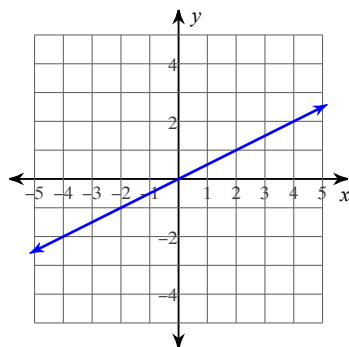


48) $x - 3y = 0$

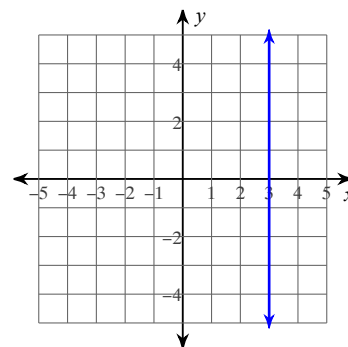


Write the slope-intercept form of the equation of each line.

49)



50)



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

51) Slope = $-\frac{1}{3}$, y-intercept = 0

52) Slope = -2, y-intercept = 5

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

53) $x + 2y = -8$

54) $x - y = 5$

55) $y + 3 = -\frac{1}{4}(x + 4)$

56) $y + 3 = \frac{5}{4}(x + 4)$

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

57) through: $(-3, -3)$, slope = $-\frac{2}{3}$

58) through: $(-2, 0)$, slope = $-\frac{5}{2}$

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

59) through: $(-5, 0)$ and $(3, 3)$

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

Answers to Summer Math 2022

1) $\{-9\}$

2) $\{-9\}$

3) $\{-19\}$

4) $\{3\}$

5) $\{-20\}$

6) $\{18\}$

7) $\{-7\}$

8) $\{1\}$

9) $\{0.36\}$

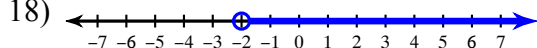
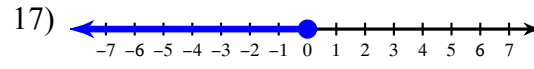
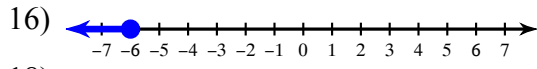
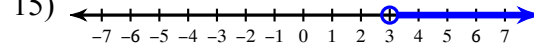
10) $\{28\}$

11) $\{9.5\}$

12) $\{3.5\}$

13) $\{-12.5\}$

14) $\{12.5\}$

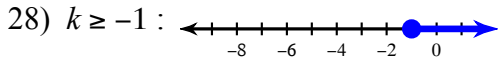
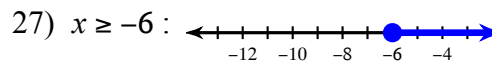
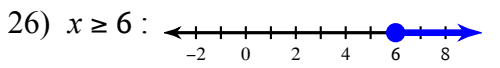
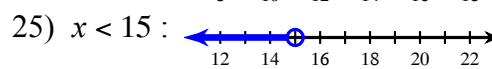
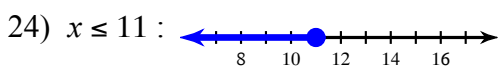


19) $m > 0$

20) $n \geq 6$

21) $m > -2$

22) $m < -5$



29) -1

30) 2

31) $-\frac{1}{4}$

32) $\frac{7}{4}$

33) $-\frac{34}{15}$

34) 4

35) $-\frac{14}{9}$

36) 6

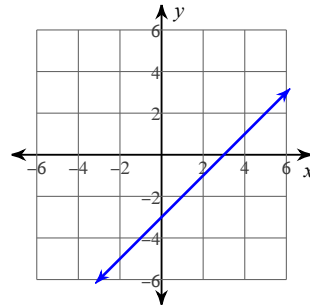
37) $\frac{4}{3}$

38) Undefined

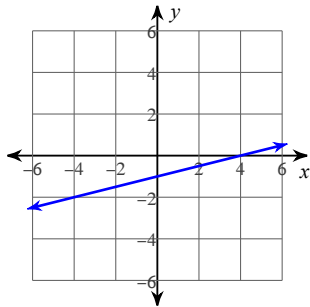
39) $\frac{7}{2}$

40) $\frac{5}{2}$

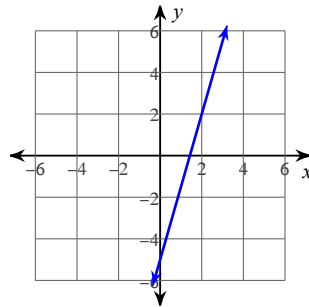
41)



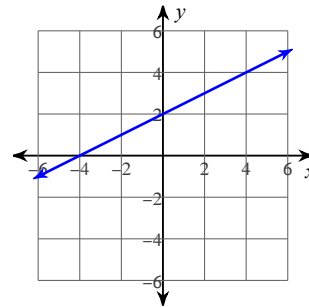
42)



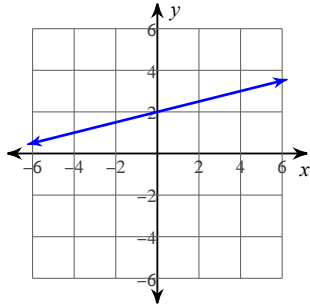
43)



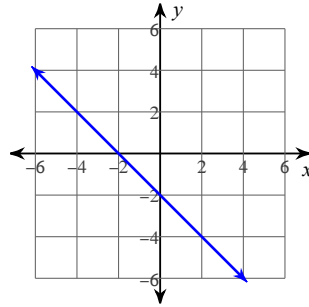
44)



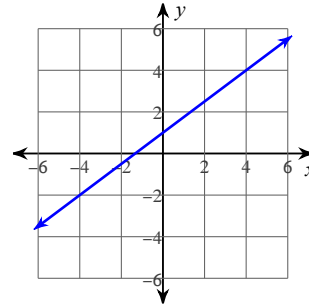
45)



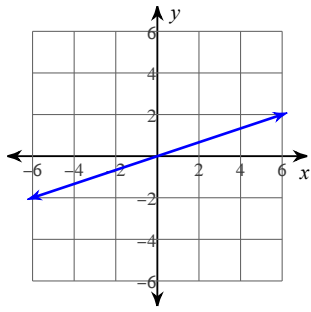
46)



47)



48)



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

50) $x = 3$

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

52) $y = -2x + 5$

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

54) $y = x - 5$

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

56) $y = \frac{5}{4}x + 2$

57) $y = -\frac{2}{3}x - 5$

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

59) $y = \frac{3}{8}x + \frac{15}{8}$

60) $y = \frac{1}{8}x - \frac{3}{2}$