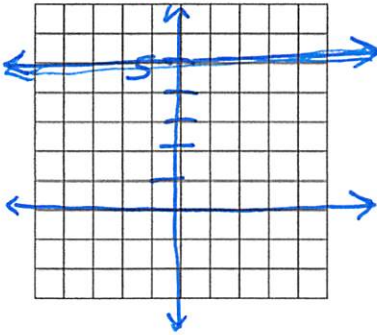


Test Review Practice

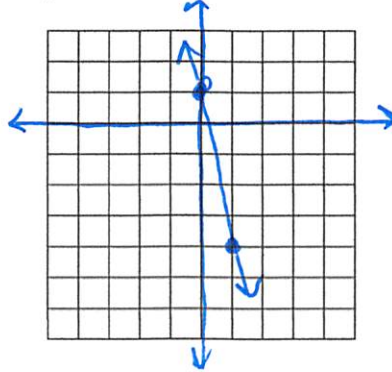
Name Ken

Graph the line that represents each linear equation. Make sure to label and scale your axis

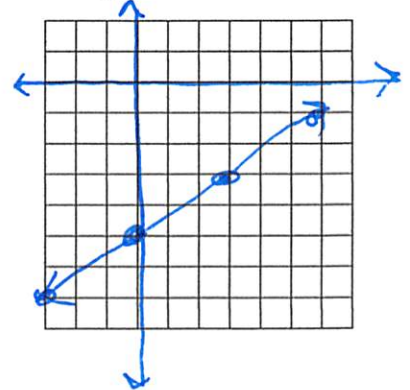
1. $\frac{-4y}{-4} = \frac{-20}{-4}$ $y = 5$



2. $y = -5x + 1$

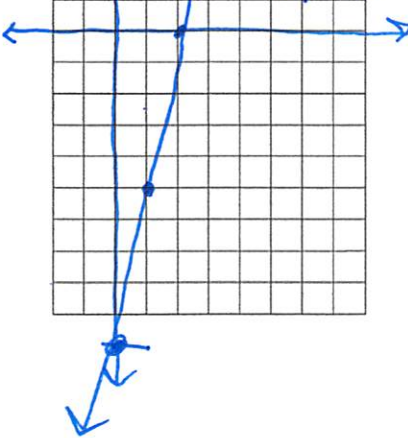


3. $y = \frac{2}{3}x - 5$

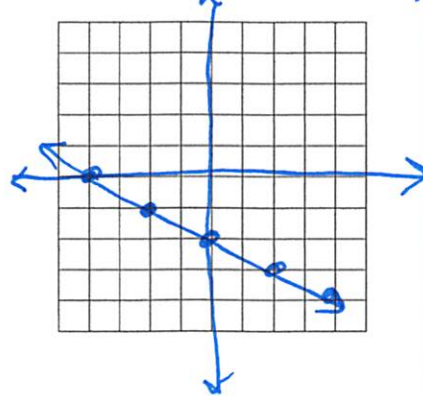


Graph the line that represents each linear equation. Make sure to label and scale your axis

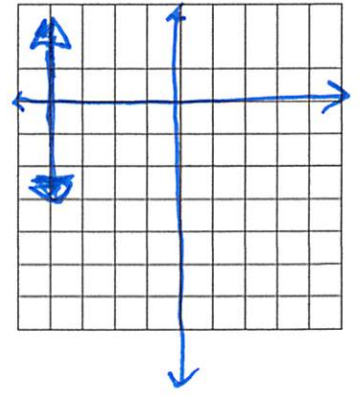
4. $-5x + y = -10$ $(2, 0)$
 $(0, -10)$



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



6. $\frac{6x}{6} = \frac{-24}{6}$ $x = -4$



Write the equation in **point-slope** form and **slope-intercept** form of the line that passes through the given points.

7. $(-1, 3)$ and $(-3, 1)$ $m = \frac{-2}{-2} = 1$

$y - 3 = 1(x + 1)$
 $y - 1 = 1(x + 3)$
 $y = x + 4$

8. $(-4, 8)$ and $(4, 6)$ $m = \frac{-2}{8} = -\frac{1}{4}$

$y - 8 = -\frac{1}{4}(x + 4)$
 $y - 6 = -\frac{1}{4}(x - 4)$
 $y = -\frac{1}{4}x + 7$

9. $(9, 2)$ and $(-3, -2)$ $m = \frac{-4}{-12} = \frac{1}{3}$

$y - 2 = \frac{1}{3}(x - 9)$
 $y + 2 = \frac{1}{3}(x + 3)$
 $y = \frac{1}{3}x - 1$

10. Zachary purchased a computer for \$1,800 on a payment plan. Three months after he purchased the computer, his balance was \$1,350. Five months after he purchased the computer, his balance was \$1,050.

a. What is an equation that models the balance B after m months?

$+2 \left(\begin{matrix} (3, 1350) \\ (5, 1050) \end{matrix} \right) \begin{matrix} -300 \\ -300 \end{matrix}$ $m = \frac{-300}{2} = -150$

$y - 1350 = -150(x - 3)$
 $y - 1350 = -150x + 450$
 $+1350$

b. What does the slope signify in Zachary's equation, and why?

He pays \$150 a month to decrease his balance. $m = -\frac{150}{1}$

$y = -150x + 1800$

11. A high school football team scores a total of 42 points by scoring touchdowns and field goals. Suppose each field goal is worth 3 points and each touchdown is worth 7 points.

a. Let x represent the number of field goals and y represent the number of touchdowns. Write an equation that models the total points scored in the game.

$$3x + 7y = 42$$

b. Identify and interpret the x - and y -intercepts. And explain what each intercept means in context of the scenario.

$$3x = 42 \quad (14, 0)$$

$$x = 14 \quad \text{you can score a maximum of 14 field goals}$$

$$7y = 42$$

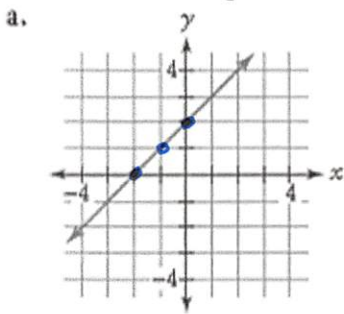
$$y = 6 \quad \text{you can score a maximum of 6 touchdowns}$$

$$(6, 0)$$

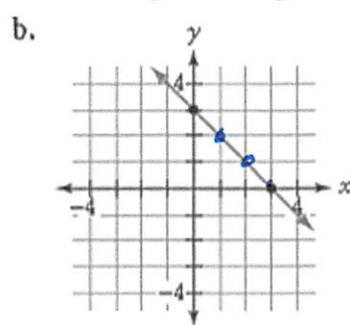
12. As a construction manager, you are asked to build a new road, which crosses the point $(0,1)$. There is another road already built, which can be expressed as $y=2x-3$. You are asked to build your road such that it will never cross this other road. Find the equation of your new road.

Parallel road $m=2$ $(0,1)$ $y = 2x + 1$

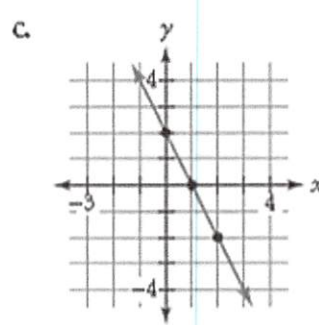
13. Write the equation of each line in slope intercept form.



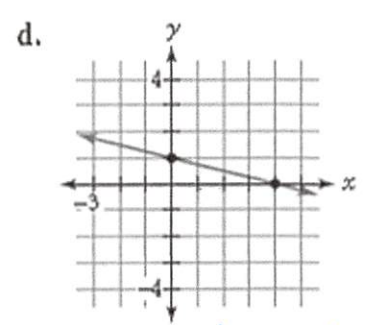
$$y = 1x + 2$$



$$y = -1x + 3$$



$$y = -2x + 2$$



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

14. Write the equation of a line that is **parallel** to each line in #13 through a point of your choice. (Draw the parallel lines in one color on the graphs **above**.)

a. $y = 1x + 7$
 ↑
 any point

b. $y = -1x - 8$
 ↑
 any y-intercept

15. Write the equation of a line that is **perpendicular** to each line in #13, that passes through the x -intercept of the given line.

a. $y = -1x - 7$

b. $y = 1x + 7$