Today's Plan:

Learning Target (standard): I will review for the semester exam.

Students will: Complete practice problems over previous concepts at the boards and study for my exam.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuarcy and provide students feedback, describe and provide examples of exam problems.
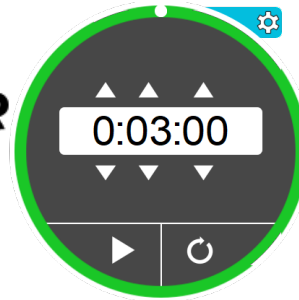
Assessment: Board work

Differentiation: Students will work at the board, actively engage in practice review concepts with the aid of other students and the teacher.

NAME _____   ⚙ #74

BELL RINGER

0:03:00

1.) Is –6 a solution to x + 5 > –1?

$-6+5>-1$ (no)

$-1>-1$

2.) Find (three) different ordered pairs that are solutions of the equation 2x + y = 5.

$y=-2x+5$

$y=-2(-1)+5$

$y=-2(1)+5$

3.) Simplify the expression. Write your answer using only positive exponents.

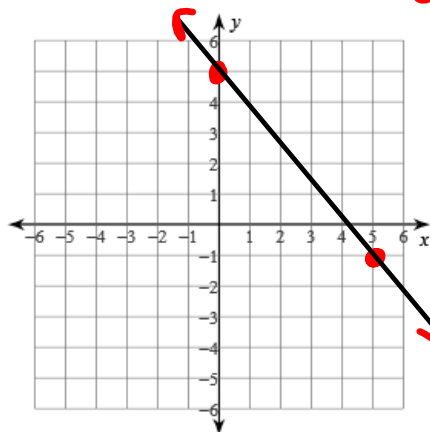$$5^3 \cdot 5^{-1}$$

$5 \cdot 5 \cdot 5 \cdot \dfrac{1}{5}$

$\dfrac{5 \cdot 5 \cdot 5}{5}$

(25)

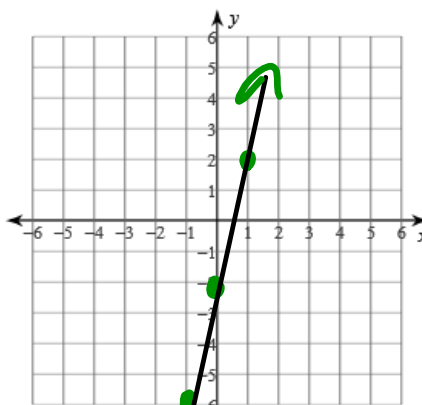| x	y
-1	7
0	5
1	3

Sketch the graph of each line using the slope-intercept method. Label the slope and y-intercept.

15) $6x + 5y = 25$

$5y = -6x + 25$

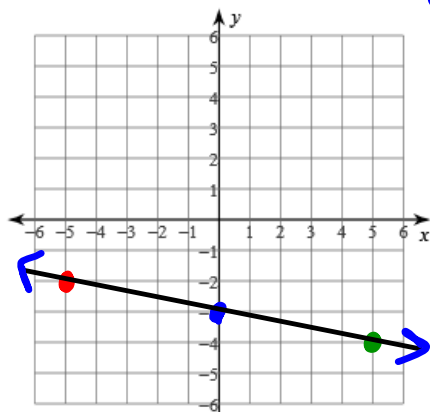$y = -\frac{6}{5}x + 5$

$m = -\frac{6}{5}$

$Iy: (0, 5)$

16) $4x - y = 2$

$-y = -4x + 2$

$y = 4x - 2$

$m = 4$

$Iy: (0, -2)$

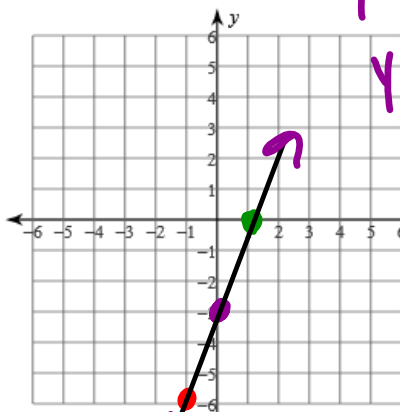**Sketch the graph of each line using a t-chart.**

17) $x + 5y = -15$

$5y = -x - 15$

$y = -\frac{1}{5}x - 3$

x	y
-5	-2
0	-3
5	-4

$y = -\frac{1}{5}(-5) - 3$

$y = -\frac{1}{5}(5) - 3$

18) $3x - y = 3$

$-y = -3x + 3$

$y = 3x - 3$

x	y
-1	-6
0	-3
1	0

$y = 3(-1) - 3$

$y = 3(1) - 3$
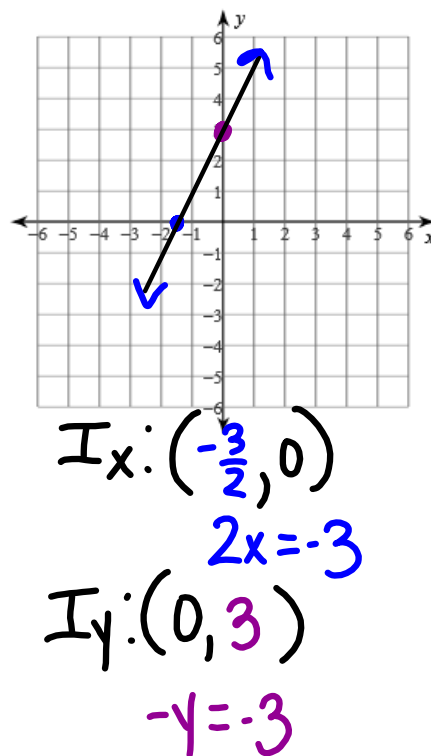
Use the intercept method to graph the equation of the line. Be sure to label each intercept.
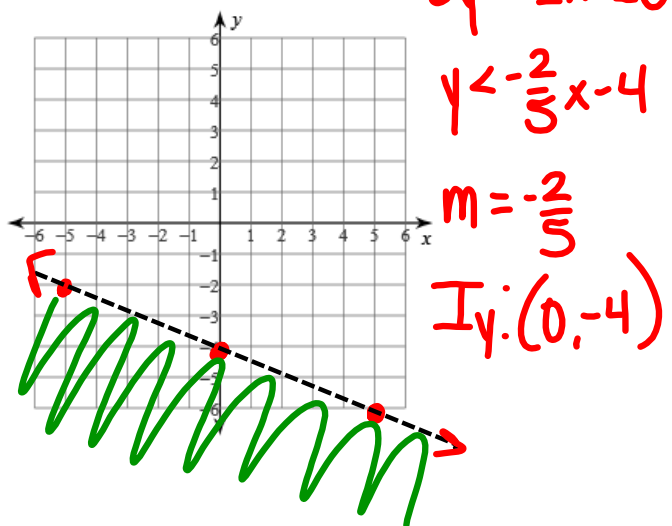
19) $3x + y = 2$

$I_x: \left(\frac{2}{3}, 0\right)$

$3x = 2$

$I_y: (0, 2)$

$y = 2$

20) $2x - y = -3$

$I_x: \left(-\frac{3}{2}, 0\right)$

$2x = -3$

$I_y: (0, 3)$
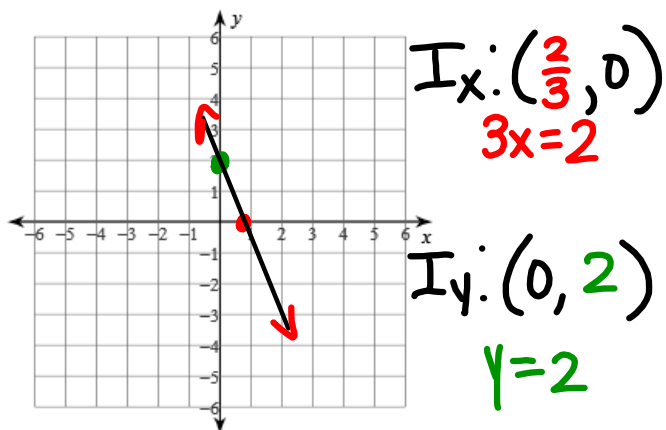
$-y = -3$

Sketch the graph of each linear inequality.

21) $2x + 5y < -20$

$5y < -2x - 20$

$y < -\frac{2}{5}x - 4$

$m = -\frac{2}{5}$

$I_y: (0, -4)$

22) $x + y > -3$

$y > -x - 3$

$m = -1$

$I_y: (0, -3)$
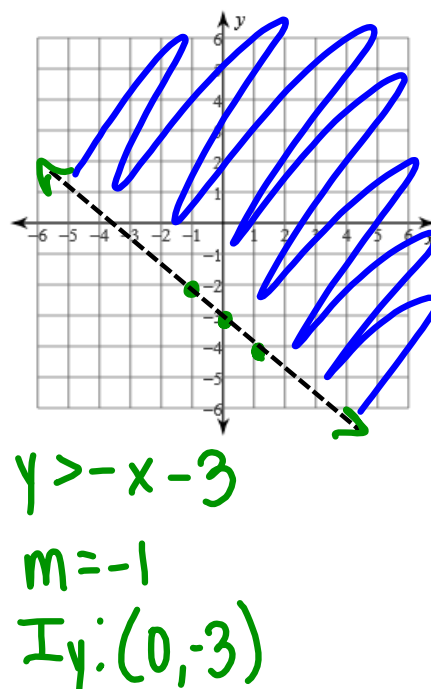
Write the slope-intercept form of the equation of the line through the given point with the slope.

23) through: $(2, -4)$, slope $= \dfrac{1}{2}$

$y = mx + b$

$-4 = \frac{1}{2}(2) + b$

$-4 = 1 + b$

$b = -5$ $\boxed{y = \frac{1}{2}x - 5}$

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

$y = mx + b$

$-1 = 2(2) + b$

$-1 = 4 + b$

$b = -5$

$\boxed{y = 2x - 5}$

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

25) through: $(-1, 3)$ and $(4, 3)$

$m = \dfrac{y_2 - y_1}{x_2 - x_1} = \dfrac{3-3}{4+1} = \dfrac{\Delta y}{\Delta x}$

$= \dfrac{0}{5}$ $\Delta y = 0$

$m = 0$ $\boxed{y = 3}$

26) through: $(-3, 0)$ and $(5, 1)$

$m = \dfrac{\Delta y}{\Delta x} = \dfrac{1-0}{5+3} = \dfrac{1}{8}$

$m = \dfrac{1}{8}$

$0 = \frac{1}{8}(-3) + b$

$0 = -\frac{3}{8} + b$

$b = \frac{3}{8}$ $\boxed{y = \frac{1}{8}x + \frac{3}{8}}$

Write the standard form of the equation of the line described.

27) through: $(1, -2)$, parallel to $y = -2x - 2$

$m_{\parallel} = -2$ $\boxed{m_1 = m_2}$ $m = -2$

$y = mx + b$

$-2 = -2(1) + b$ $y = -2x$

$-2 = -2 + b$ Standard

$b = 0$ $\boxed{2x + y = 0}$

28) through: $(-3, -5)$, perp. to $y = -\frac{4}{9}$

$m_{\perp} = \frac{9}{4}$ $\boxed{m_1 = -\frac{1}{m_2}}$ $m = -\frac{4}{9}$

$y = mx + b$

$-5 = \frac{9}{4}(-3) + b$

$-5 = -\frac{27}{4} + b$

$\frac{-5 + 27}{4} = b$

$\frac{-20}{4} + \frac{27}{4} = b$

$b = \frac{7}{4}$ $^{-4}\left(y = \frac{9}{4}x + \frac{7}{4}\right)$

standard

$-4y = -9x - 7$

$\boxed{9x - 4y = -7}$