Semester 1 Review Series **Module 5** (linear graph, equations, exponents)

#1-2, determine the slope of each.

1. (3, -4) and (10, -1)

2. (4,3) and (8,3)

#3, Graph each

a. x = -4

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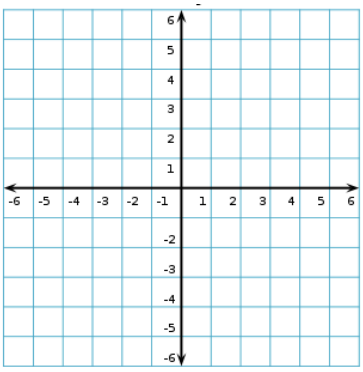
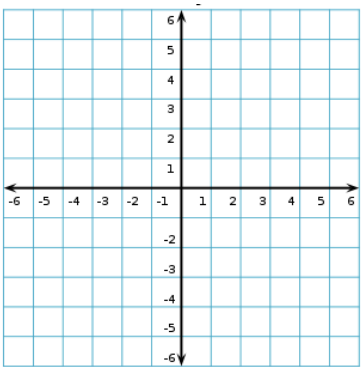
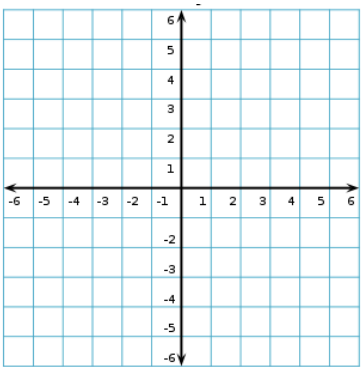


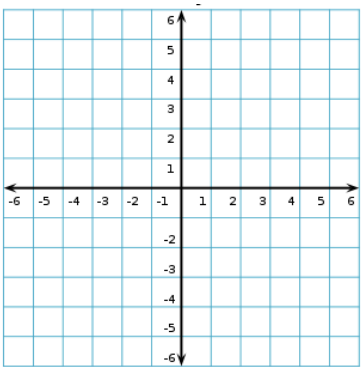
b. y = 3x - 5



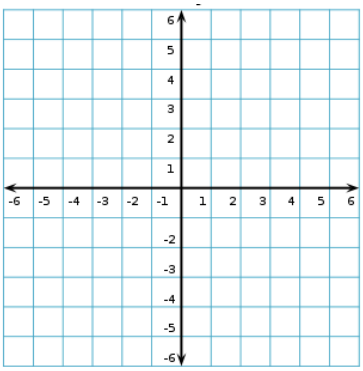
c. 2x – 5y = 10



d. y > -2x + 3

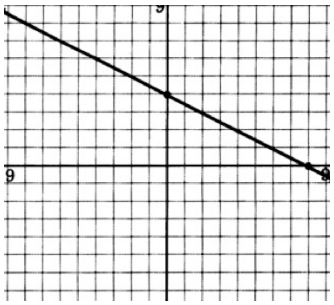


e. y ≤ 2



#4-6, Write the equation of the line for each situation.

4.



5. Slope is $\frac{1}{4}$ and goes through (-8, 15)

6. Goes through (3,4) and (4, 6)

7. A mountain climber is making his way up a mountain at 200 feet per hour. At 3 hours his altitude is 4,100 feet.

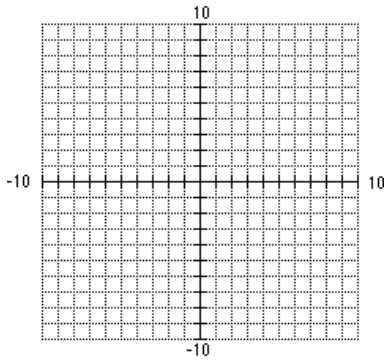
a. Write an equation that relates his altitude, *y*, to the time he has been climbing, *x*.

b. What do you predict the climber's altitude to be in 5.5 hours?

Semester 1 Review Series **Module 6** (solving and graphing systems of equations)

1. Solve the system below by *graphing it by hand* (graph at right)

$$\begin{cases} 6x+4y=12 \\ y=-2x+1 \end{cases}$$



#2-3 Solve each system by using *substitution*

2. $\begin{cases} x=3y+5 \\ 2x-4y=12 \end{cases}$

3. $\begin{cases} a+b=9 \\ 2a-3b=8 \end{cases}$

#4-5 Solve each system with the *elimination* or *Adding/Subtracting* method.

4. $\begin{cases} 3x-4y=-5 \\ -5x+2y=6 \end{cases}$

5. $\begin{cases} 5x-2y=11 \\ 15x-6y=-20 \end{cases}$

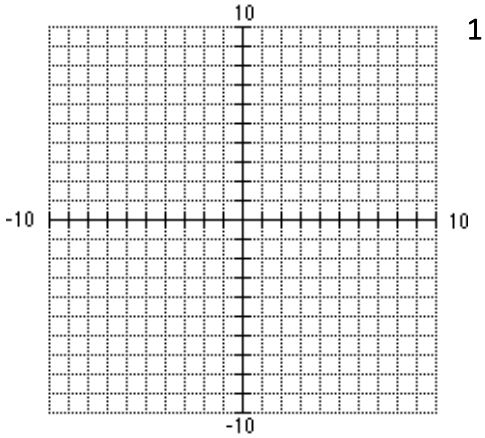
#6-7, Solve each system using any method you choose.

6. $\begin{cases} 3m-n=7 \\ 2m-3n=1 \end{cases}$

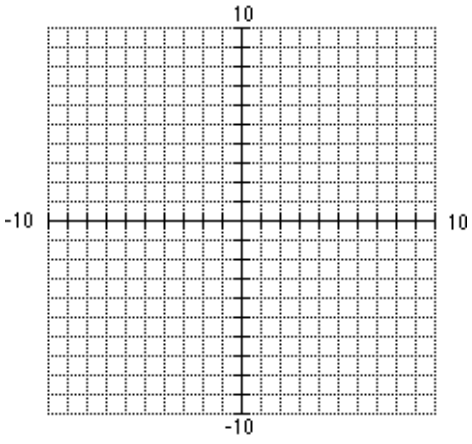
7. Two small pitchers and one large pitcher can hold 24 cups of water. One large pitcher minus one small pitcher constitutes 7.5 cups of water. How many cups can each pitcher hold?

#10-11, Graph the solutions to the systems of inequalities.

10. $\begin{cases} -3x+y<-5 \\ 2+y\le x \end{cases}$



11. $\begin{cases} y\ge 2x-3 \\ y<-\frac{5}{4}x+2.5 \\ y>-3 \end{cases}$



12. Is the point (8, 2) a solution to the system from problem #10?

13. Find the solutions to the system graphed below