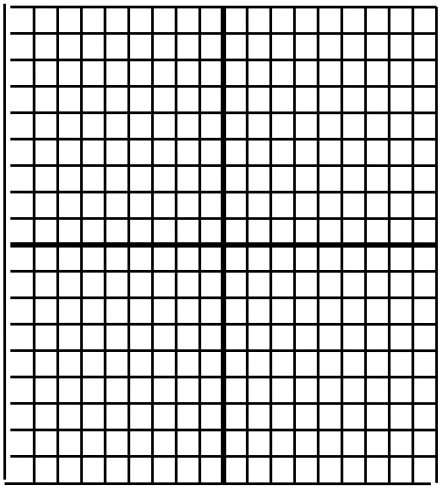
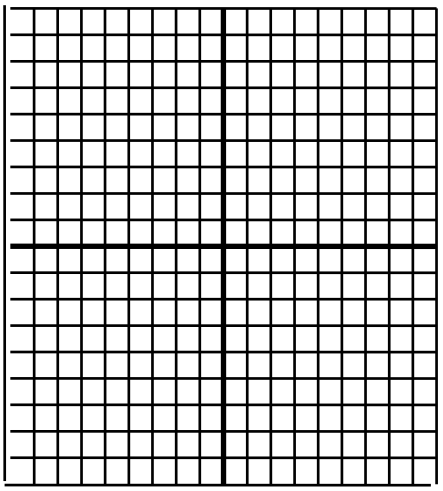
Math 60/80
Review Exam 2
K. Meier

1) Graph the linear equation: $y = \frac{3}{4}x - 1$



2) Graph the linear equation: $2x + 4y = 8$



3) Find the <u>slope</u> of the line that contains the two points: $(-2, 8)$ *and* $(5, 2)$

4) Find the equation for the line with slope 5 and contains the point $(-3, 2)$

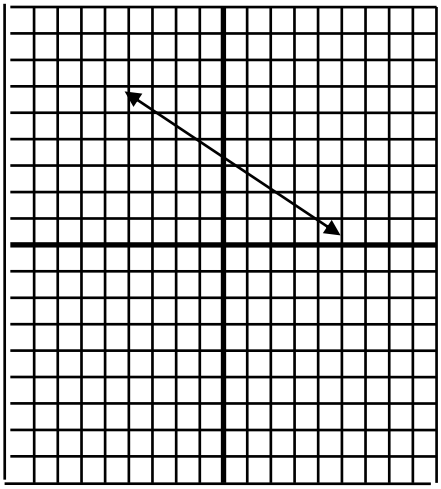
5) Find the equation for the line that contains: $(-4, -7)$ *and* $(2, -1)$

6) Find the intercepts for the linear equation: $3x - 4y = 8$ (give as ordered pairs)

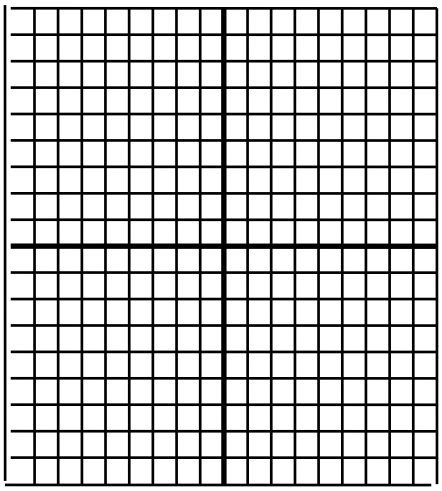
X-intercept_____

Y-intercept_____

7) Give the equation for the line given in the graph:



8) Graph the line: 2x = 6



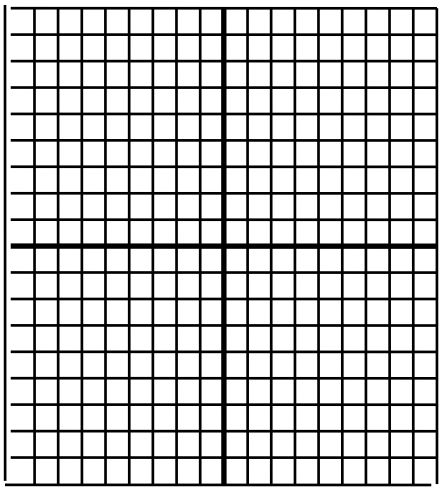
9) Are the lines parallel, perpendicular or neither. Show why

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

10) Find the equation of the line that is parallel to $2x-y=6$ and contains (1 , -3)

11) Solve the system graphically:

$$\begin{aligned} -x+3y &= 10 \\ x+y &= 2 \end{aligned}$$



Solve by any method:

12)

$$\begin{aligned} 10x-5y &= -21 \\ \frac{2}{3}x+2y &= 0 \end{aligned}$$

13) $\begin{cases} 2x-3y=1 \\ 4x=6y+2 \end{cases}$

14) $\begin{cases} 4x+y=0 \\ 5x+2y=-3 \end{cases}$

15) Mr. Kie invested a total of $27,000 in two businesses. His investment in Leather Touch earned 8% annually while the money invested in Simply Together earned 3%. If the total earnings was $2060; How much was invested in each business?

16) At the latest rock concert, six children and 4 adult tickets cost $528. While nine children and 8 adult tickets cost $912. What was the price of each adult and each child's ticket?

17) Against the wind a plane flew 630 miles in 3.5 hours. With the wind the return trip took 3 hours. What was the speed of the wind and the speed of the plane in still air?

18) Solve the system: $\begin{cases} 3x+y-3z=31 \\ 3x+3y-z=9 \\ x+5y-6z=17 \end{cases}$

19) A chemistry stockroom has a jar of 25% hydrochloric acid and a jar of 40% acid. If 90 ml of a 30% solution is needed for today's experiment, how much of each should be mixed?

Answers:

1) Line has y-int at (0,-1) and slope up 3, over 4
2) Line has y-int. at (0,2) and slope -1/2 (down 1, over 2)
3) m = -6/7
4) y = 5x + 17
5) y = x - 3
6) x intercept: (8/3,0) y intercept: (0, -2)
7) y = -2/3x + 4
8) graph is vertical line thru x = 3
9) The lines are perpendicular (slopes are neg. reciprocals, -2/3 & 3/2)
10) y = 2x – 5
11) (-1,3) 12) (-9/5,3/5) 13) Infinite solutions 14) (1,-4)
15) $2000 @3% and $25,000 @8% 16) Childs $48 Adults $60
17) plane 195 mph, wind 15 mph. 18) (6, -5, -6)