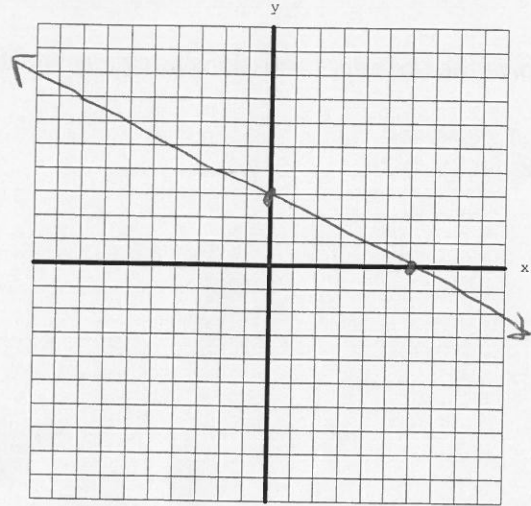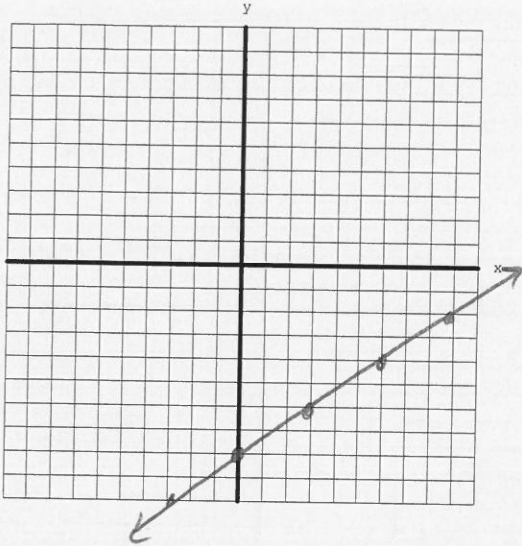# Unit 2 HW 25

Name_____ Date_____ Period_____

Graph each linear equation

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

2. $4x + 8y = 24$

Calculate the slope of the line through the two ordered pairs.

3. $(3, 10)$ *and* $(6, 4)$

4. $(-3, 8)$ *and* $(7, 3)$

-2

$-\frac{1}{2}$

5. Write the equation of a line with a slope of $\frac{3}{4}$ and a y-intercept of 9.

$$y = \frac{3}{4}x + 9$$

6. Write the equation of a line with a slope of $\frac{2}{3}$ through the point $(6, 2)$
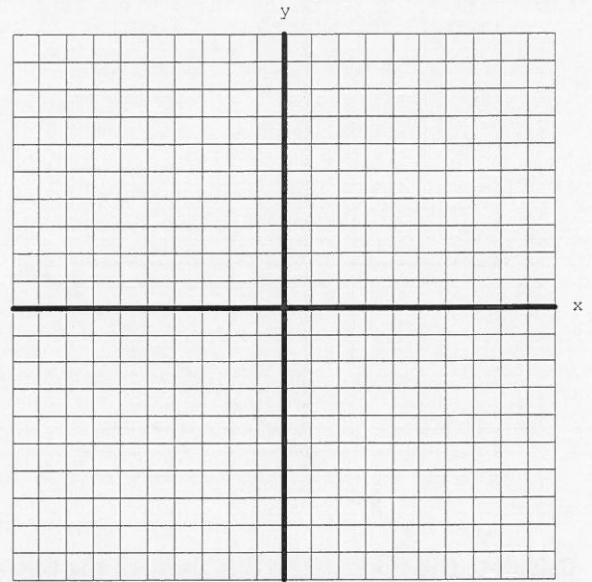
$$y = \frac{2}{3}x - 2$$

7. Write the equation of a line through the points $(4, 5)$ and $(8, 3)$

$$y = -1/2x + 7$$

8. Solve the system of equations using any method.

$$\begin{cases} y = 2x - 8 \\ 2x + 3y = 24 \end{cases}$$

$(6, 4)$

9. The chess club has 16 members and gains a new member every month. The film club has 4 new members and gains 4 new members every month. Write and solve a system of equations to find when both clubs will have the same number of members.

4 months

10. This year Pleasant Valley and Bettendorf decided to take a field trip to the state fair. Pleasant Valley rented and filled 8 vans and 8 buses with 240 students total. Bettendorf rented and filled 4 vans and 1 bus with 54 students total. Find the number of students in each van and in each bus.

22 in each bus
8 in each van