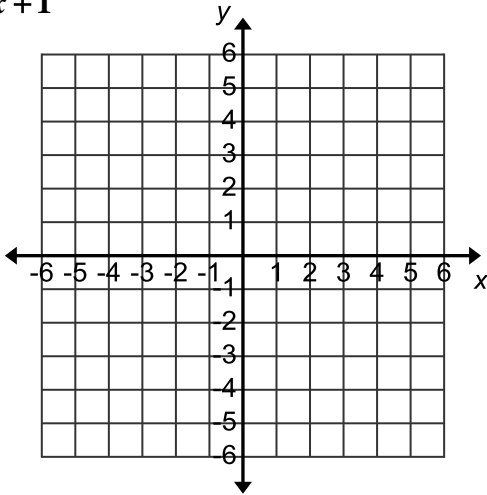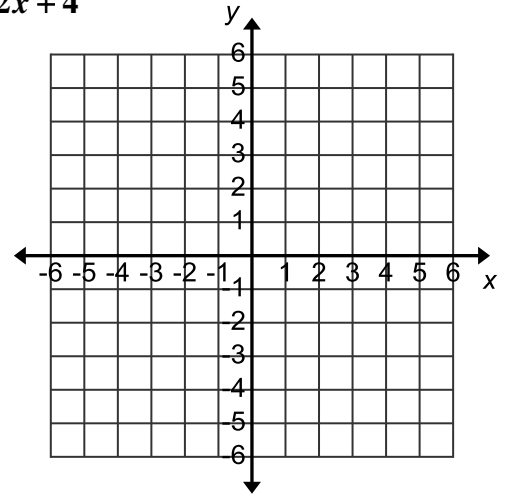# HW 8-3:  Solve Systems by Graphing

**Solve each system of equations by graphing.**
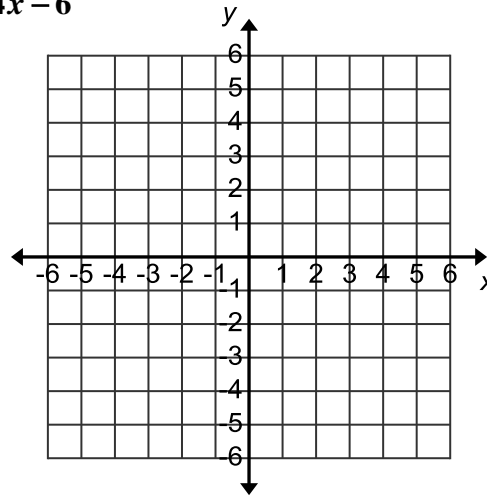
**1)**
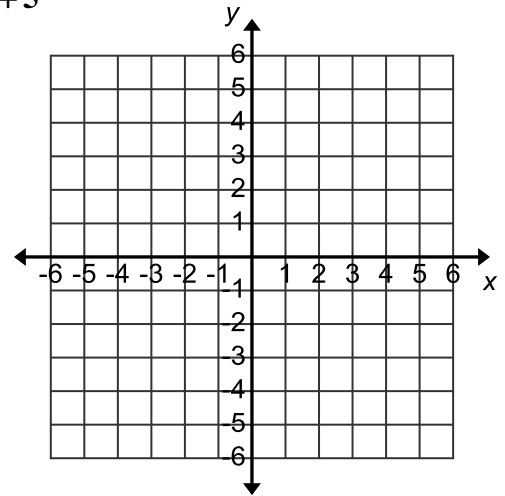$y = -x + 3$
$y = x + 1$

**2)**
$y = -x + 4$
$y = -2x + 4$
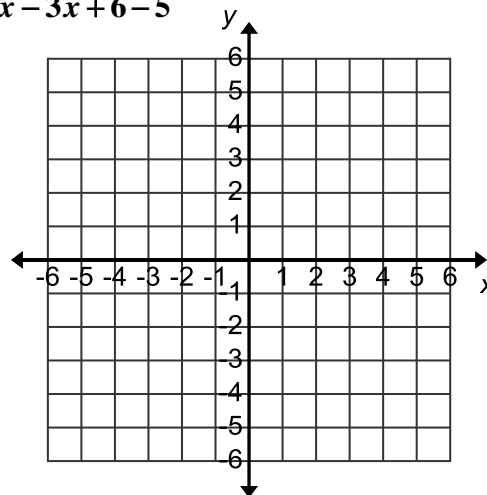
**3)**
$y = -2x$
$y = 4x - 6$

**4)**
$y = x$
$y = x + 5$
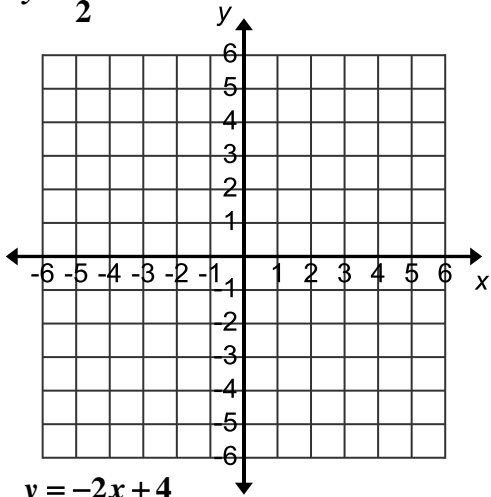
**5)**
$y = -2x + 1$
$y = x - 3x + 6 - 5$

**6)**
$y = \dfrac{1}{2}x - 3$
$y = 2x$
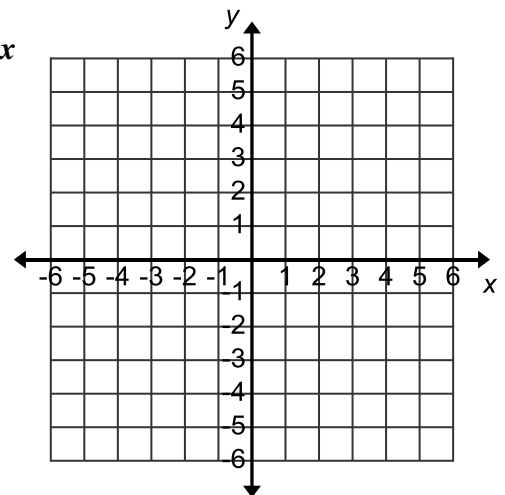
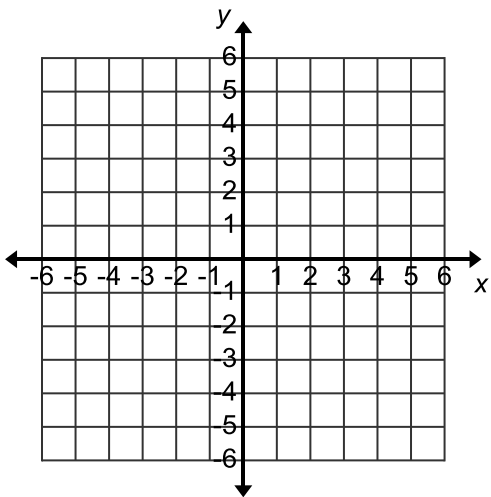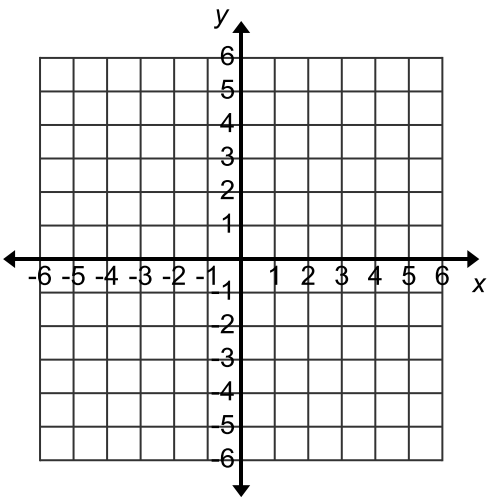**Solve each system of equations by graphing.**

7) $y - 4x = -3$
$y = \dfrac{1}{2}x + 4$
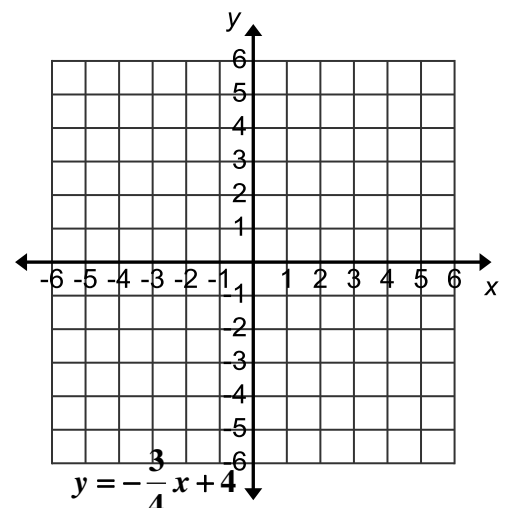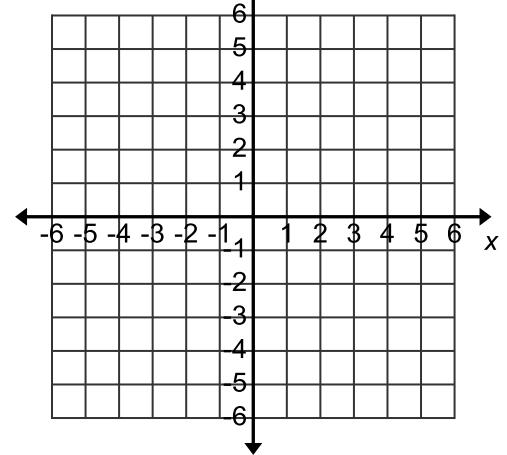
8) $y = 4$
$y = -3x + 10$

9) $y = -2x + 4$
$y = 3x - 1$

10) $y = -\dfrac{3}{4}x + 4$
$y = \dfrac{3}{4}x - 2$

11) $y = 7x - 4$
$y - 7x = -4$

12) $y = \dfrac{1}{3}x - 3$
$y = \dfrac{1}{3}(x + 6)$

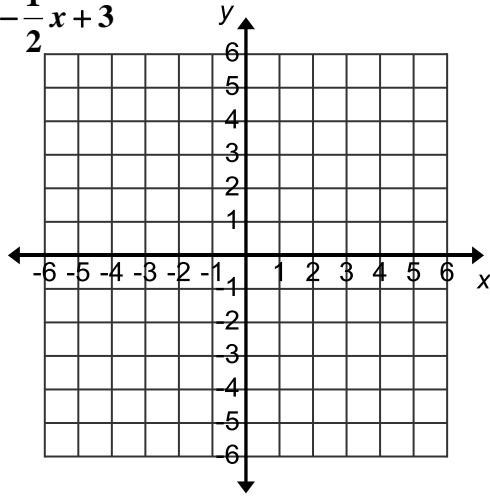**Solve each system of equations by graphing.**
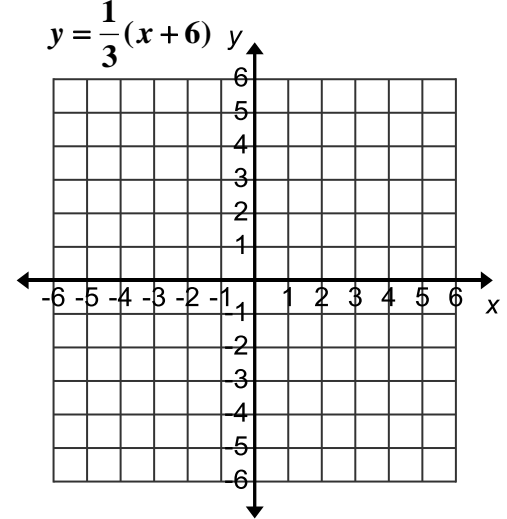
13)
$$y = -\frac{1}{3}x + 2$$
$$y = -2x - 3$$
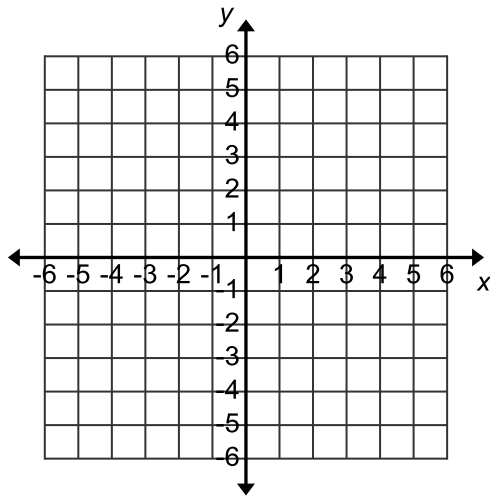
14)
$$y = -\frac{2}{5}x + 1$$
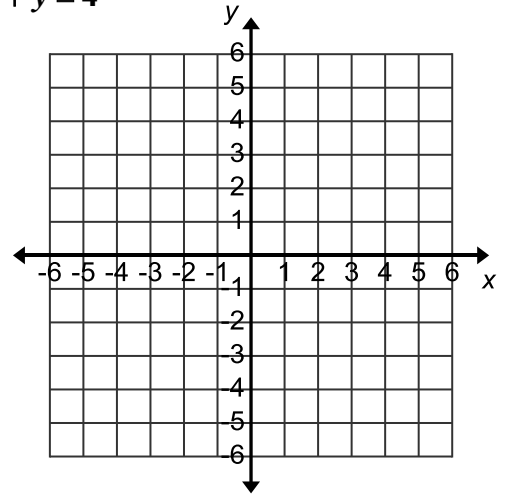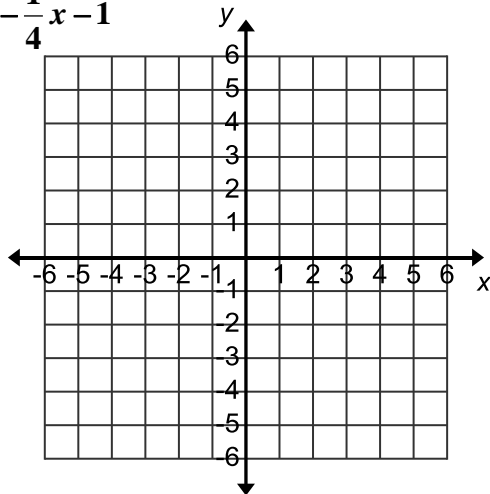$$y - 3 = -\frac{2}{5}x$$
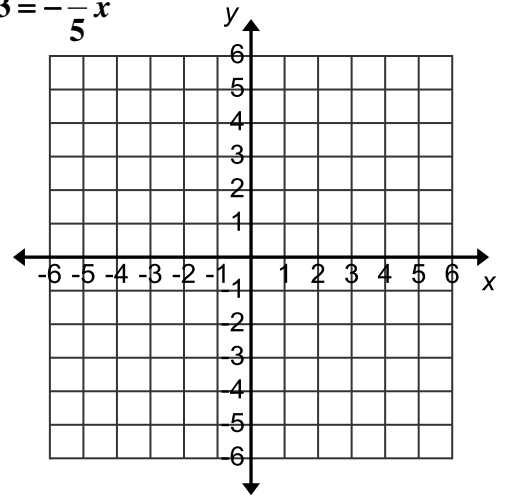
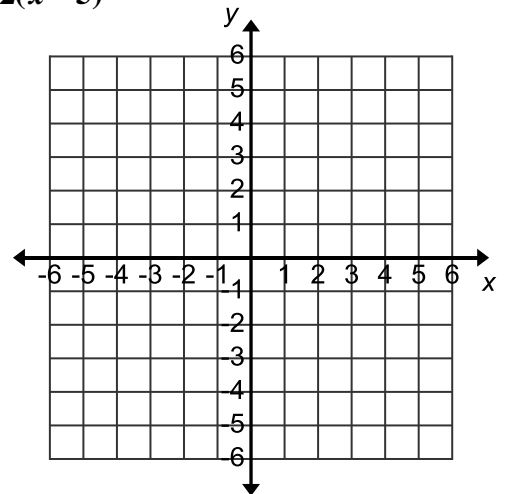15)
$$y = 3x - 4$$
$$y = -\frac{1}{2}x + 3$$

16)
$$y = -5x - 3$$
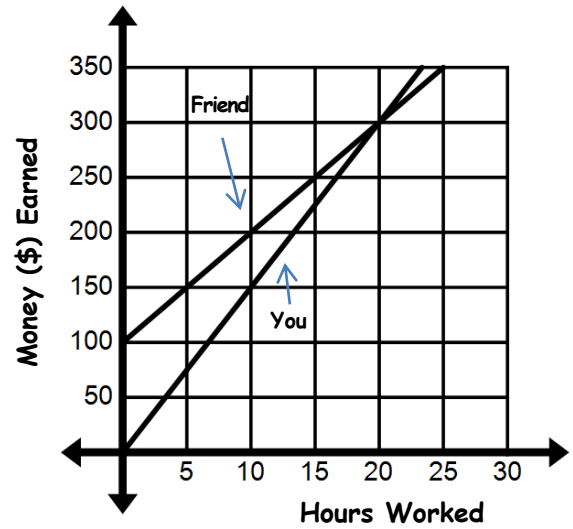$$-2x + y = 4$$

17)
$$x = 4$$
$$y = -\frac{1}{4}x - 1$$

18)
$$y = 2x - 10$$
$$y = 2(x - 5)$$

19. Two equations in a system are shown in the graph. Which of the following statements is true?

The following graph shows you and your friend at your summer jobs. Use the graph to answer questions 20-27.

20. How much money do you make per hour?  How much money does your friend make per hour?

21. Which of you earns a bonus?   How much is the bonus?

22. If you both work 50 hours per week, who would make more money?

24. How much does your friend make if he works 15 hours?

25. Your friend wants to buy a new high definition TV for playing video games with you.  They will be on sale for $350.  How many hours does he need to work in order to buy one?

26. Your brother wants to get hired to work for 10 hours.  Which job do you recommend he take: yours or your friend's?

27. How many hours would your brother work and make the same amount of money at either job?  How much would that be?