|			
1.a. $\dfrac{-17}{2}$	1.b. -17	1.c. x = 4	1.d. x = 5
1.e. y = 5, $\quad$ y = $\dfrac{-13}{3}$	1.f. x = -12 , $\quad$ x = 6	1g. x = $\dfrac{19}{12}$, $\quad$ x = $\dfrac{-1}{12}$	1.h. y = 10 , $\quad$ y = -14
1.i. No solution	2a. y = $\dfrac{-1}{2}x + 3$	2b. b = $\dfrac{D-c}{a}$	2c. C = $\dfrac{5}{9}(F-32)$
2.d. $x = \dfrac{3}{5}y - 3$	3.a. x < -4 $\quad (-\infty,-4)$ -8 -4 0 4	3.b. $a \geq -9$ $\quad [-9,\infty)$ -9 -6 -3 0 3	3.c. b > -8 $\quad (-8,\infty)$ -8 -4 0 4
3.d. $a \geq 4$ $\quad [4,\infty)$ 0 4 8 12	3.e. x > -3 and x < 2 $\quad (-3,2)$ -6 -3 0 3 6	3.f. x < -6 or x > 11 $\quad (-\infty,-6)\bigcup(11,\infty)$ -12 -6 0 6 12	3.g. x ≥ -1 and x ≤ 7 $\quad [-1,7]$ -8 0 8 16
3.h. x ≥ 10 or x ≤ -20 $(-\infty,-20]\cup[10,\infty)$ -30 -15 0 15 30	4.a. <table><tr><th>X</th><th>Y</th></tr><tr><td>-2</td><td>-5</td></tr><tr><td>-1</td><td>-5</td></tr><tr><td>0</td><td>-5</td></tr><tr><td>1</td><td>-5</td></tr><tr><td>2</td><td>-5</td></tr></table>	4.b. <table><tr><th>X</th><th>Y</th></tr><tr><td>4</td><td>-2</td></tr><tr><td>4</td><td>-1</td></tr><tr><td>4</td><td>0</td></tr><tr><td>4</td><td>1</td></tr><tr><td>4</td><td>2</td></tr></table>	4c. <table><tr><th>X</th><th>Y</th></tr><tr><td>-6</td><td>7</td></tr><tr><td>-3</td><td>5</td></tr><tr><td>0</td><td>3</td></tr><tr><td>3</td><td>1</td></tr><tr><td>6</td><td>-1</td></tr></table>
4.d. <table><tr><th>X</th><th>Y</th></tr><tr><td>-8</td><td>-7</td></tr><tr><td>-4</td><td>-4</td></tr><tr><td>0</td><td>-1</td></tr><tr><td>4</td><td>2</td></tr><tr><td>8</td><td>5</td></tr></table>	5.a. x intercept: $(4,0)$, y intercept: $(0,2)$	5.b. x intercept: $(8,0)$, y intercept: $(0,-4)$	5.c. x intercept: $(-2,0)$, y intercept: $(0,6)$
5.d. x intercept: $(-3,0)$, y intercept: $(0,5)$	6.a. A) m = - 4 $\quad$ B) b = 14 $\quad$ C) y = - 4x+14	6.b. A) m = $\dfrac{4}{3}$ $\quad$ B) b = -3 $\quad$ C) $y = \dfrac{4}{3}x - 3$	6.c. A) m = -3 $\quad$ B) b =15 $\quad$ C) y = -3x + 15
6.d. A) m = -1 $\quad$ B) b = -1 $\quad$ C) y = - x -1	6.e. A) m =undefined $\quad$ B) no y intercept $\quad$ C) x = -3	6.f. A) m = 0 $\quad$ B) b = 2 $\quad$ C) y = 2	7.a. y = $\dfrac{-8}{5}x - \dfrac{3}{5}$
7.b. y = $\dfrac{-1}{2}x + 4$	7.c. y = -2 x + 13	7.d. y = $\dfrac{3}{2}x + 2$	7.e. y = 2 x + 5
8.a. (2, 1)	8.b. (3, 1)	8.c. $(0,4)$	9.a. $(-1,2)$
9.b. $(2,-4)$	9.c. $(2,-3)$	10.a. $(1,1)$	10.b. $(0,-2)$
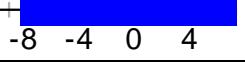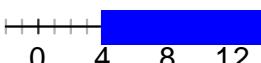
|			
10.c. $(-5,4)$	11.See graphs for a, b, and c.	12.a. $-9x^5 + 9x^4 + x^3 - 7x^2 + 5x$	
12.b. $-7x^2 + 17$	12.c. $-7x^3 - 6x^2 + 8x + 6$	12.d. $9y^2 - 10y - 15$	12.e. $10x^3 - 16x^2 - 6x - 2$
12.f. $18x^2 + 6$	13.a. $20a^{10} - 20a^9 + 80a^6$	13.b. $y^2 - 9y - 36$	13.c. $4a^2 - 29a + 30$
13.d. $-100x^{10}y^9$	13e. $9x^2 + 24x + 16$	13.f. $9x^5 - 18x^4 + 72x^3$	13g. $5y^2 + 42y - 27$
13.h. $64y^2 - 1$	13.i. $16x^2 - 49$	13.j. $x^3 - 2x^2 - 8x - 5$	13.k. $60x^5 y^8 z^3$
13.l. $25x^2 - 110x + 121$	14.a. $5y(y-2)(y-2)$	14.b. $(x+11)(x-3)$	14.c. $(x+4)(x-8)$
14.d. $4a^2 b^2 (b + 2a - 3)$	14.e. $(y-3)(y-7)$	14.f. $3(x+5)(x-2)$	14g. $(2x+3)(x+1)$
14.h. $(2x-3)(3x+5)$	14.i. $(x+6)(x-6)$	14.j. $5x(x+3)(x-3)$	14.k. $(3x+2)(x-4)$
14.l. $(2x+5)^2$	15.a. x = -5 and X = 8	15.b. x = -8 and X = 11	15.c. x = -7 and X = -5
15.d. x = -1 and $x = \dfrac{2}{3}$	15.e. x = -2 and X = 2 and X = 0	15.f. $x = -\dfrac{1}{5}$ and x = 3	15.g. $x = -\dfrac{3}{2}$ and $x = \dfrac{1}{2}$
15.h. x = 5 for both solutions	15.i. $x = -\dfrac{3}{2}$ and $x = \dfrac{5}{3}$	16a. $-\dfrac{1}{x+y}$	16.b. $\dfrac{x+2}{x+1}$
16.c. $-x - 7$	16d. $\dfrac{x-4}{2(x+4)}$	16.e. $\dfrac{2x+5}{x+4}$	16.f. 4x-1
16.g. $6x^3 + 9x - 4$	16.h. $-6a^7 c^7$	16.i. $x(x+2)$	17.a. 2
17.b. $\dfrac{x+6}{(x+4)(x+1)}$	17.c. $\dfrac{5x+7}{(x+1)(x+2)}$	17.d. $\dfrac{1}{(2x+1)(x+5)}$	17.e. $\dfrac{-7}{(y-8)(y+6)}$
17.f. $\dfrac{-x+4}{x(x+3)(x+2)}$	18.a. $\dfrac{x+2}{x-3}$	18.b. $\dfrac{x+5}{x-3}$	18c. $\dfrac{3x+4}{x-9}$
18.d. $\dfrac{3}{4}$	18.e. $\dfrac{(x-2)}{(x-4)(x-1)}$	18.f. $\dfrac{x+9}{x}$	19.a. x = 3
19.b. $x = \dfrac{9}{2}$	19.c. x = 2	19.d. x = 0	19.e. y = −9 y = 2 is not a solution
19.f. x = 19	20.a. −32	20.b. $\dfrac{y^6}{64x^9}$	20.c. $\dfrac{1}{27x^6}$

20.d. $2y^3$	20.e. $3^9 = 19{,}683$	20.f. $16c^{48}$	20.g. $-\dfrac{1}{8}$
20. h. $\dfrac{y^5}{x^9}$	20.i. 1.	20.j. $\dfrac{b}{a^5}$	20.k. $\dfrac{y^7}{x^2}$
20.l. $\dfrac{2y^3}{x^2}$	21.a. $2\sqrt{31}$	21.b. $8x^4y^9\sqrt{5y}$	21.c. $3\,xy^2\sqrt{2x}$
21.d. $8\,x^2y\sqrt{xy}$	21.e. $8\,ab^2\sqrt{3a}$	21.f. $\dfrac{2a^9b^4\sqrt{a}}{c^2}$	21.g. $-20x^2y^2\sqrt{3y}$
21.h. $\dfrac{5\sqrt{3}}{9}$	21.i. $2\,y^2\sqrt{x}$	21.j. $2i\sqrt{3}$	21.k. $3i\sqrt{10}$
21.l. $9i\sqrt{3}$	22.a. $\left(\sqrt[5]{32}\right)^2 = 4$	22.b. $\left(\sqrt{25}\right)^3 = 125$	22.c. $\left(\sqrt[3]{-27}\right)^2 = 9$
22.d. $\sqrt{4y^5} = 2y^2\sqrt{y}$	22.e. $\left(\sqrt[3]{64}\right)^5 = 1024$	22.f. $\left(\sqrt[3]{-125}\right)^4 = 625$	23.a. $y^{\frac{2}{3}}$
23.b. $7^{\frac{2}{5}}$	23.c. $x^{\frac{4}{5}}y^{\frac{3}{5}}$	23.d. $(5x)^{\frac{2}{3}}$	24.a. $20\sqrt{3}$
24.b. $-33\sqrt{3}$	24.c. $12\sqrt{15}$	24.d. $55\sqrt{2}$	24.e. $-56\sqrt{2}$
24.f. $-19+5\sqrt{3}$	24.g. $-8\sqrt{10}$	24.h. $6\sqrt{3}-5\sqrt{6}$	25.a. $3\sqrt{2}$
25.b. $2\sqrt{5}-\sqrt{6}$	25.c. $\dfrac{\sqrt{6}}{3}$	25.d. $\dfrac{5\sqrt{3}}{3}$	25.e. 9
25.f. $\sqrt{14}$	26.a. y = 34	26.b. y = 12	26.c. x = 2, and x = 5
26. d. x = 98	26.e. x = 3 does not check, so there is no solution	26.f. y = 26	27.a. $2i$
27.b. $2i\sqrt{3}$	27.c. −10	28.a. −2 + 4 i	28. b. −5 −3i
28.c. 17 +2i	28.d. −19 +4i	28.e $-6+12i$	28.f. 38 + 16i
28 g. $-4\sqrt{6}$	28.h. $88-66i$	28.i. 34	29.a. x = -2 and x = 5
29.b. x = 8 and x = 9	29.c. x = -5 and x = -4	30.a. x = -3 and x = 5	
30.b. $x=\pm 2i\sqrt{6}$	30.c. $x=-2\pm 2\sqrt{2}$	30.d. x = -1 and x = 9	
30.e. x = -8 and x = - 6	30.f. $x=\pm 5\sqrt{3}$	31.a. x = 1 and x = 11	
31.b. $x=2\pm 2i$	31.c. $x=-3\pm 3\sqrt{3}$	31.d. $x=5\pm 2\sqrt{3}$	
31.e. $x=-4\pm 4\sqrt{2}$	31.f. $x=-1\pm 3i$	32.a. $x=2\pm\sqrt{7}$	
32.b. $x=\dfrac{-3\pm i\sqrt{23}}{4}$		32.c. x = -5 and x = 10	
32.d. $x=2\pm 2i\sqrt{7}$		32.e. $\dfrac{2\pm i\sqrt{2}}{3}$	
32.f. x = 0 and x = 5		33.a. Vertex: $(-2,-2)$ Y intercept: $(0,2)$ Axis of symmetry: x = - 2	

33.b. Vertex: $(0,-1)$ Y intercept: $(0,-1)$ Axis of symmetry: x =0	33.c. Vertex: $(3,1)$ X intercepts: $(4,0)$ and $(2,0)$ Y intercept: $(0,-8)$ Axis of symmetry: x = 3
33.d. Vertex: $(-2,-10)$ Y intercept: $(0,-6)$ Axis of symmetry: x = - 2	33.e. Vertex: $(-3,-2)$ Y intercept: $(0,7)$ Axis of symmetry: x = -3
33.f. Vertex: $(0,-4)$ Y intercept: $(0,-4)$ Axis of symmetry: x = 0	34.a. Center: $(0,0)$, Radius: 4
34.b. Center: $(5,-2)$, Radius: 5	34.c. $(x+5)^2 +(y+3)^2 = 64$ Center: $(-5,-3)$, Radius: 8
34.d. $(x+3)^2 +(y-4)^2 = 49$ Center: $(-3,4)$, Radius: 7	35.a. $(x-6)^2 +(y+3)^2 = 4$
35.b. $(x+2)^2 +(y+7)^2 = 7$	35.c. $x^2 +(y-8)^2 = 36$
35.d. $(x-2)^2 + y^2 = 16$	36.a. n = 52
36.b. 1st integer = 55 2nd integer = 57 3rd integer = 59	36.c. width = 39 feet length = 91 feet

36.d. First number: x = 14 or x = -15
 Second number: x + 1= 15 or
       x + 1= -14
	36.e. First number: x = 18 or x = -20
	 Second number: x + 2= 20 or
	       x + 2= -18

36.f. Yes, it is a solution	36.g. x = 20
36. h. m = 200	36. i. $x^2 +5x-14$

4.a. y = - 5
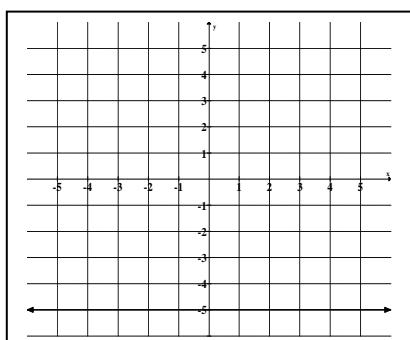
4.b. x = 4
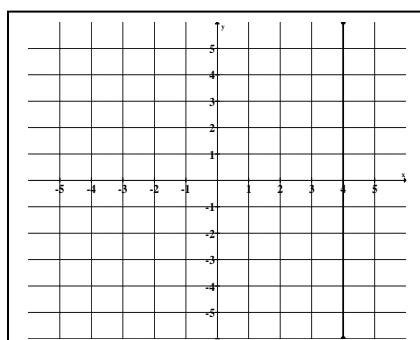
4.c. y = $\dfrac{-2}{3}$ x + 3
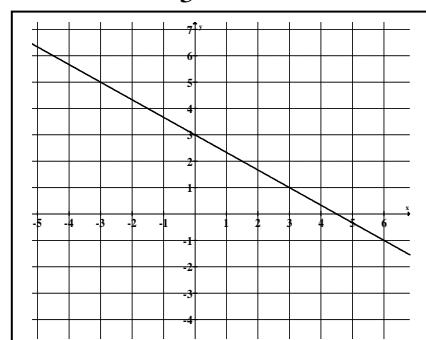
4.d. y = $\dfrac{3}{4}$ x – 1
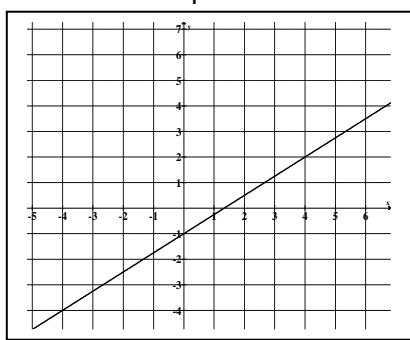
5.a. $y = -\dfrac{1}{2}x + 2$
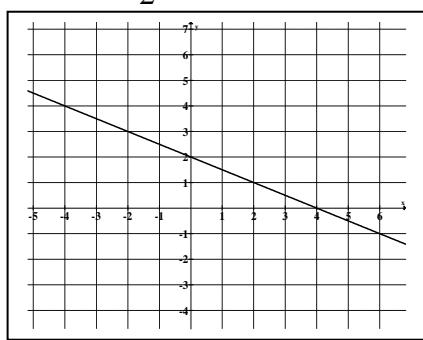
5.b. $y = \dfrac{1}{2}x - 4$
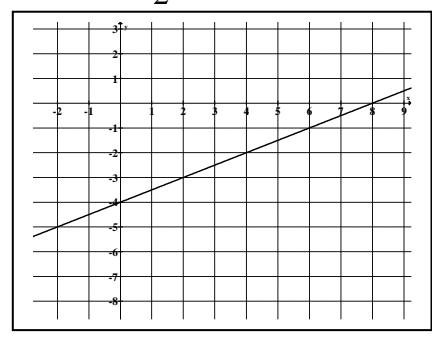

5.c. y = 3x + 6
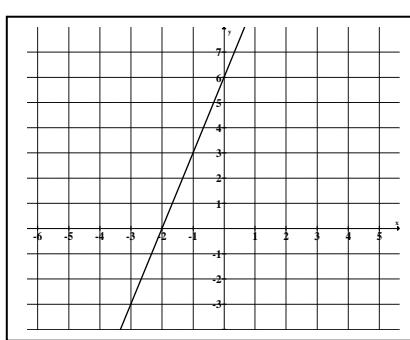
5.d. $y = \dfrac{5}{3}x + 5$
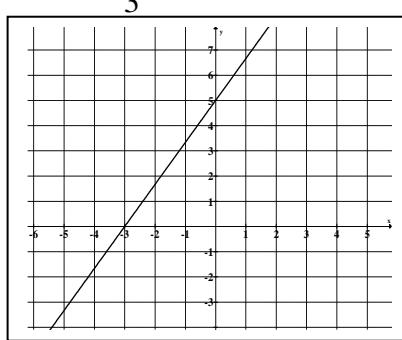

6.a. y = -4x+14
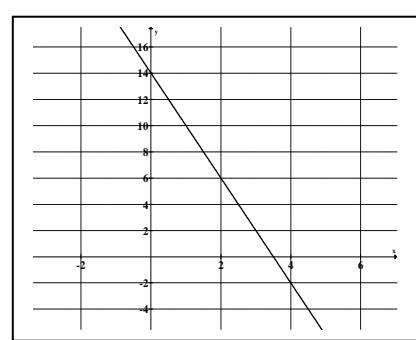
6.b. $y = \dfrac{4}{3}x - 3$
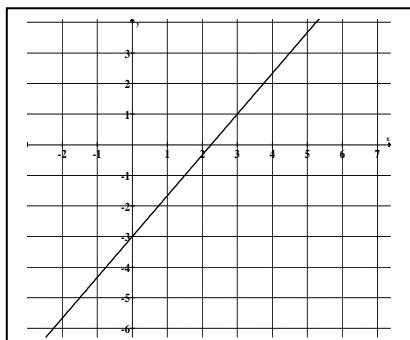
6.c. y = –3x+15
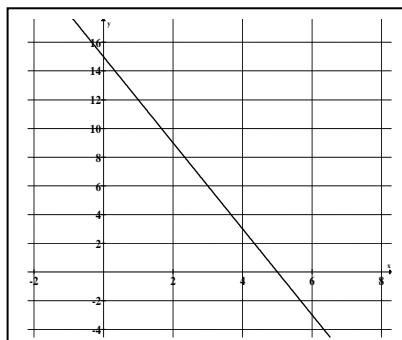

6.d. y = –x –1
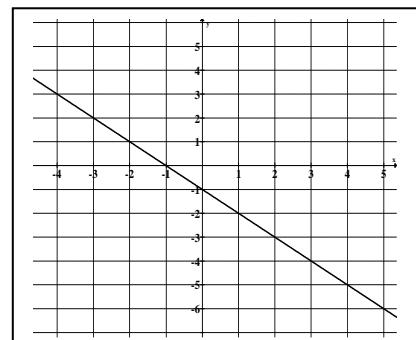
6.e. x = − 3   6.f. y = 2   8.a. $3x + 6y = 12$
                                                                                  $2y = 4x - 6$
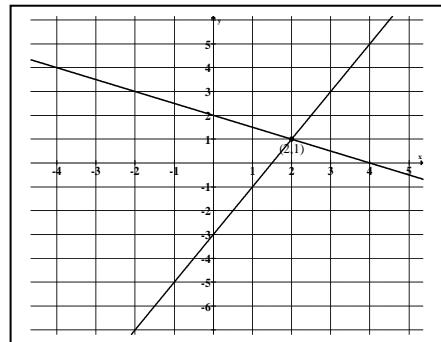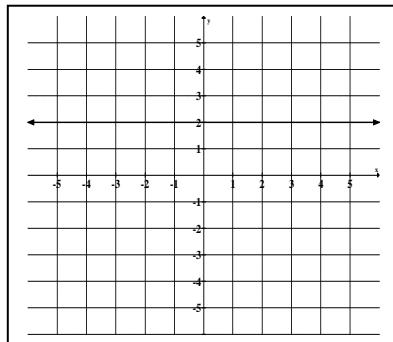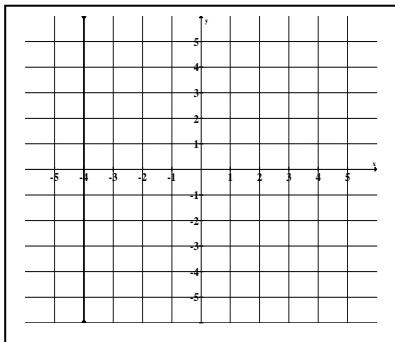
Solution at (2,1)

8.b. $2x + 6y = 12$ 8.c. $y = -2x + 4$ 11.a. y < -2x + 3
       $3x - 2y = 7$ $y = \dfrac{3}{2}x + 4$

Solution at (3,1)   Solution at (0,4)
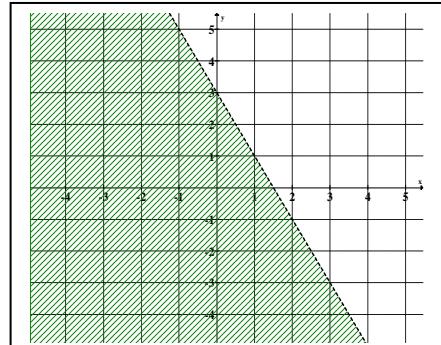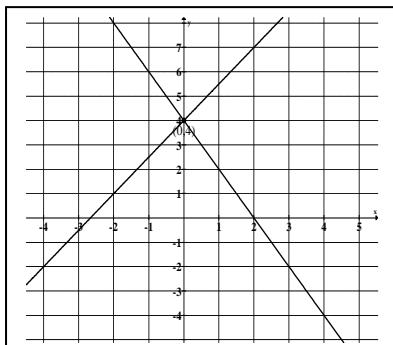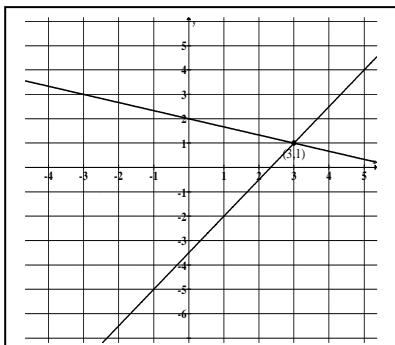
11b. −x + 2y > - 8   11.c. 5x −3y ≥ -15   33.a. $y = (x + 2)^2 - 2$
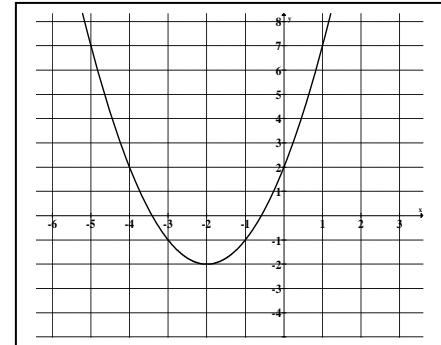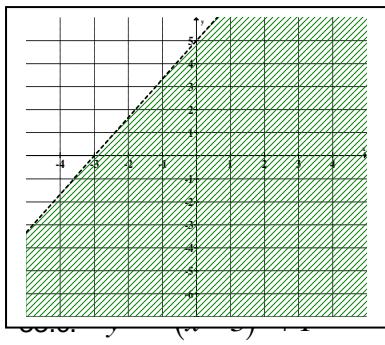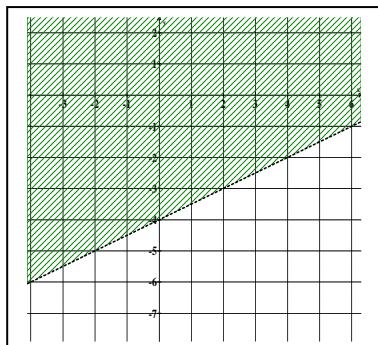
33.b. $y = -x^2 - 1$
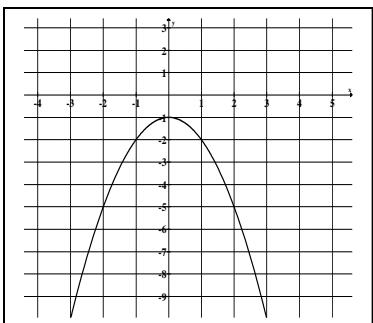
33.c. $y = -(x-3)^2 + 1$
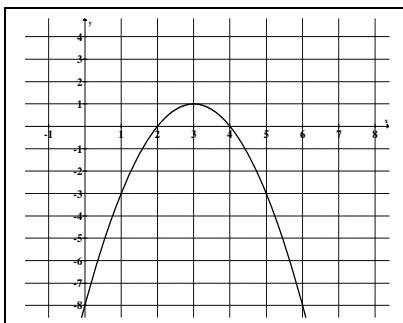
33.d. $y = x^2 + 4x - 6$
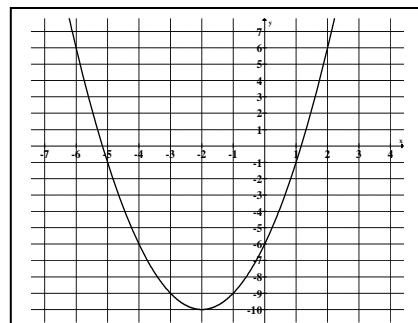
33.e. $y = x^2 + 6x + 7$
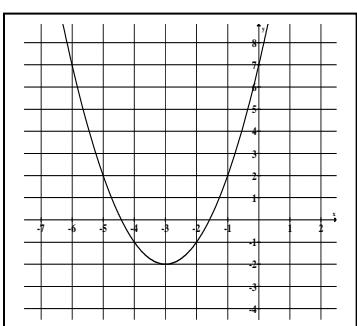
33.f. $y = -2x^2 - 4$
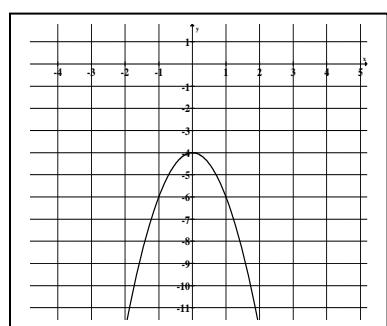
34.a. $x^2 + y^2 = 16$
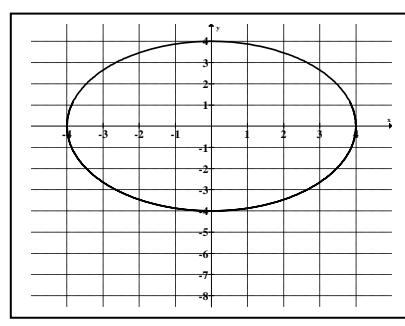
34.b. $(x-5)^2 + (y+2)^2 = 25$
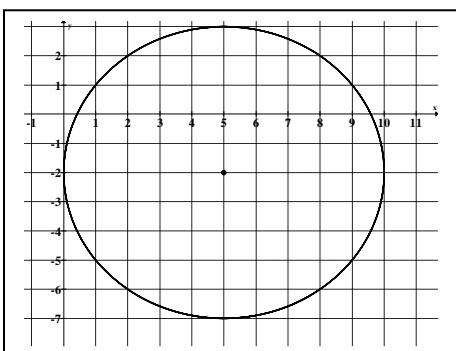
34.c. $(x+5)^2 + (y+3)^2 = 9$

34.d. $(x+3)^2 + (y-4)^2 = 49$