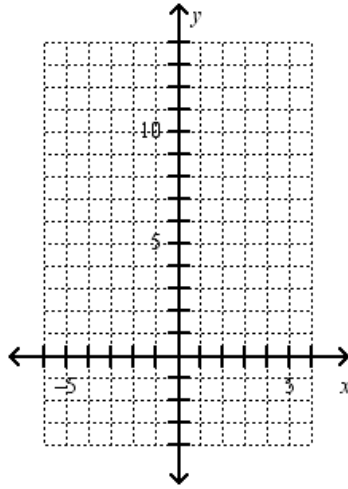# Assignment 21

Name: _____
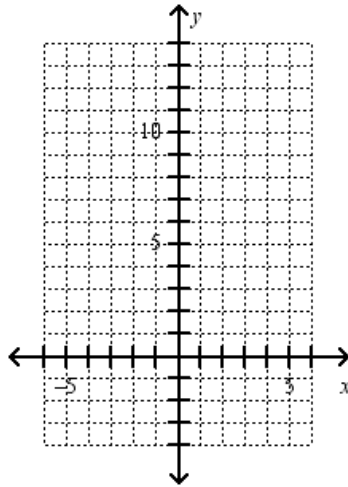
Section 1 – Graphing with General Form
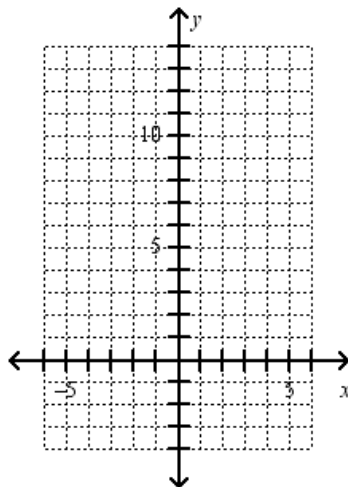*Complete the square and graph.*

1. $y = x^2 + 6x + 7$
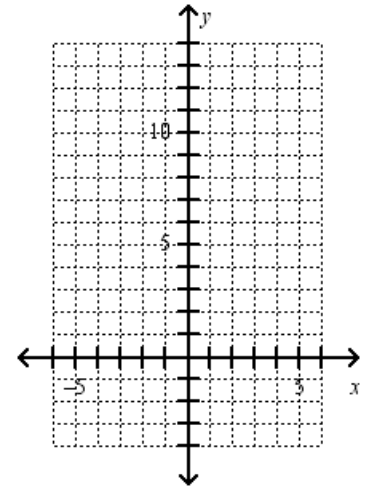
2. $y = x^2 - 4x + 1$
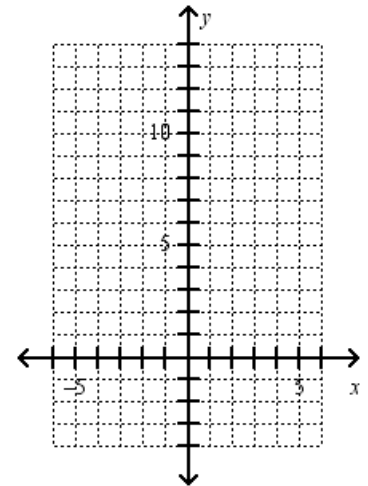
3. $y = x^2 + 2x + 3$

Section 2 – Mixed Form Graphing with
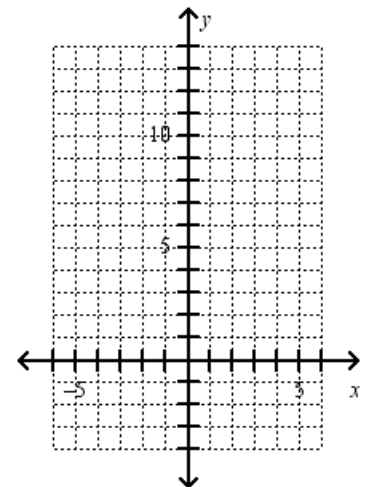*Graph each quadratic.*

4. $y = -x^2 + 12$

5. $y = (x + 2)^2 - 3$

6. $y = x^2 + 6x + 10$

Section 3 – Practice Finding the Vertex

Some of these you can read off the vertex others you will have to complete the square and then read off the vertex. List each vertex as an (x,y) pair.

1. $y = (x-4)^2$

2. $y = x^2 + 10x + 15$

3. $y = -2(x+1)^2 + 8$

4. $y = 3x^2 - 4$

5. $y = x^2 + 4x - 5$

6. $y = x^2 - 2x$

Section 4 – Simplify the Radicals

1. $\dfrac{8}{\sqrt{2}}$

2. $\dfrac{15}{\sqrt{3}}$

3. $\dfrac{\sqrt{28}}{\sqrt{7}}$

4. $\dfrac{12}{\sqrt{6}}$

5. $\dfrac{15\sqrt{2}}{\sqrt{5}}$

6. $\dfrac{\sqrt{24}}{\sqrt{3}}$

Section 5 – Review Final Exam

1. Solve: $6 + \sqrt{2x+1} = 11$

2. Factor: $25x^2 - 9$

3. Factor completely: $x^3 + 3x^2 - x - 3$

4. Simplify: $\left(\dfrac{2a^3}{ab^5}\right)^4$

5. Solve: $x^2 - 17 = 0$