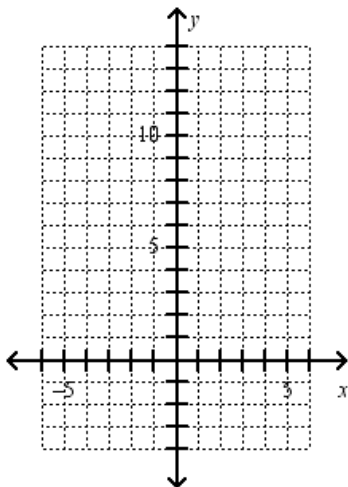# Assignment 20

Name: _____
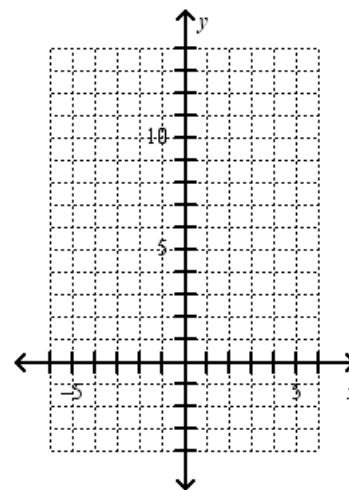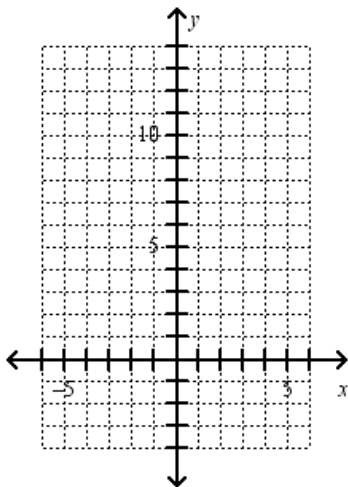
Section 1 – Graphing with Vertex Form
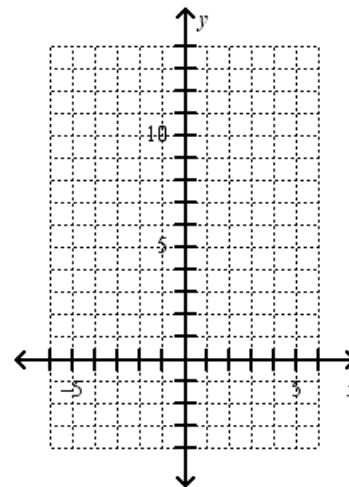*Graph out of vertex form.*
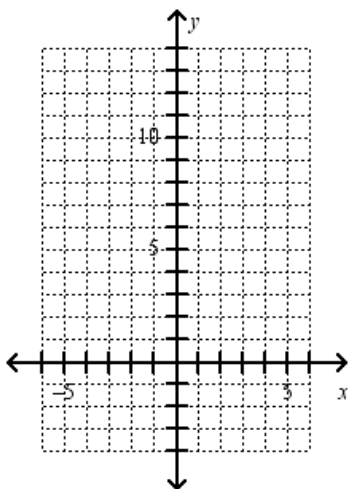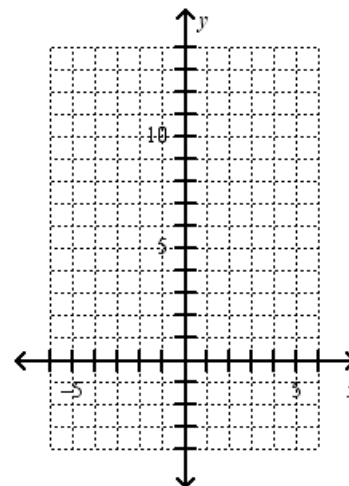
1. $y = (x-4)^2$

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

2. $y = x^2 - 4$

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

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

6. $y = (x+3)^2$

Section 2 – Practice Reading off the Vertex

List each vertex as an (x,y) pair.

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

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

3. $y=2(x+1)^2-6$

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

5. $y=\dfrac{1}{3}(x+5)^2+5$

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

4. Simplify: $x^3 \cdot y^5 \cdot x^5$

5. Find the sum in simplest form of 4, $4\sqrt{5}$, and $\sqrt{20}$

6. Solve: $-6+\sqrt{x-7}=-2$

7. Factor: $9x^2-16$

8. Factor completely: $3x^3+5x^2-12x-20$

Section 3 – Review Final Exam

1. Factor: $x^2+14x+40$

2. Simplify: $(6x^2+7x+3)+(-9x+5)$

3. Simplify: $(x^2+2x-1)-(x^3+6x-5)$

9. Simplify: $\sqrt{12x^3y^6z^5}$

10. Simplify: $\left(\dfrac{2x^4y}{y^2}\right)^3$