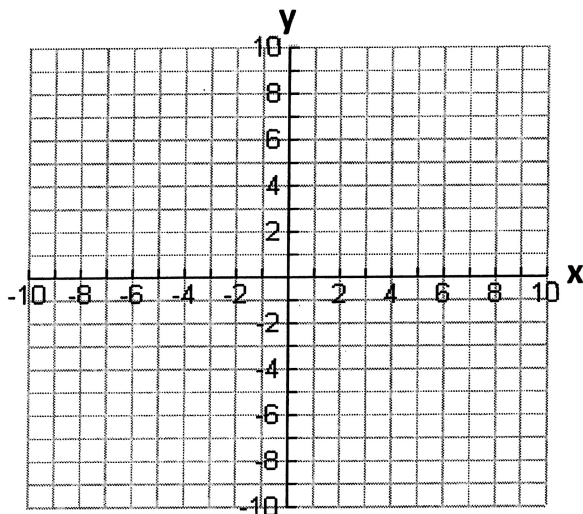


## Graphing Quadratic Relationships (Parabolas)

Complete the table of values, graph the relationship, then fill in the chart.

a)  $y = x^2 - 4x + 5$

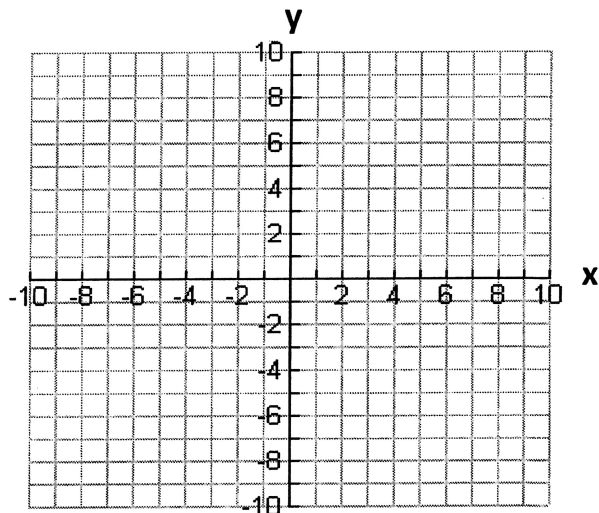
x	y
-1	
0	
1	
2	
3	
4	
5	



coordinates of the vertex	
maximum or minimum at the vertex	
direction of opening	
x-intercept(s)	
y-intercept	
Equation for the axis of symmetry	

b)  $y = -x^2 + 4$

x	y
-3	
-2	
-1	
0	
1	
2	
3	



coordinates of the vertex	
maximum or minimum at the vertex	
direction of opening	
x-intercept(s)	
y-intercept	
Equation for the axis of symmetry	

## Homework

For each equation below:

1. Complete the table of values and graph the parabola.
2. Determine the coordinates of the vertex.
3. Identify the vertex as either a minimum or maximum.
4. Write the equation of the axis of symmetry.
5. Determine the y-intercept.

a)  $y = x^2 + 1$

x	y
-2	
-1	
0	
1	
2	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

b)  $y = x^2 - 4x + 1$

x	y
0	
1	
2	
3	
4	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

c)  $y = x^2 - 2x + 3$

x	y
-1	
0	
1	
2	
3	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

d)  $y = x^2 + 2x + 4$

x	y
-3	
-2	
-1	
0	
1	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

e)  $y = 2x^2 - 5$

x	y
-2	
-1	
0	
1	
2	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

f)  $y = -x^2 - 4x + 1$

x	y
-4	
-3	
-2	
-1	
0	

**Vertex:**  
**Max/Min:**  
**Axis of S.:**  
**y-int:**

