

**Reminders:** Please **show all your work** neatly on this worksheet.

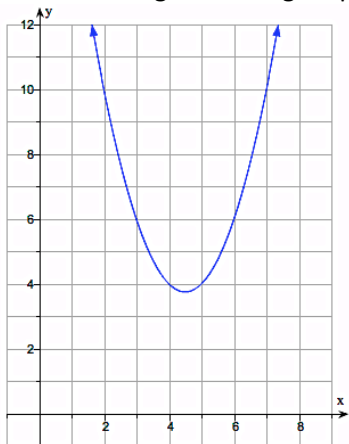
This should be some of your most careful work!

Name: \_\_\_\_\_

	<i>Show your work neatly (when relevant).</i>
1-8	See attached graph paper
9.	Compare the graphs in 1-4. Discuss the table of values as well as vertex position and “how” the graphs move around the coordinate system.
10.	Compare the graphs in 5 & 6. Discuss the table of values as well as vertex position and “how” the graph in 5 moved.
11.	Compare the graphs 1 & 5. Discuss the table of values as well as vertex position and “how” the graph in 5 moved.
12.	Compare the graphs in 5, 7 & 8. Discuss the table of values and how individual ordered pairs moved from the positions in 5 to the positions in 7 and 8.

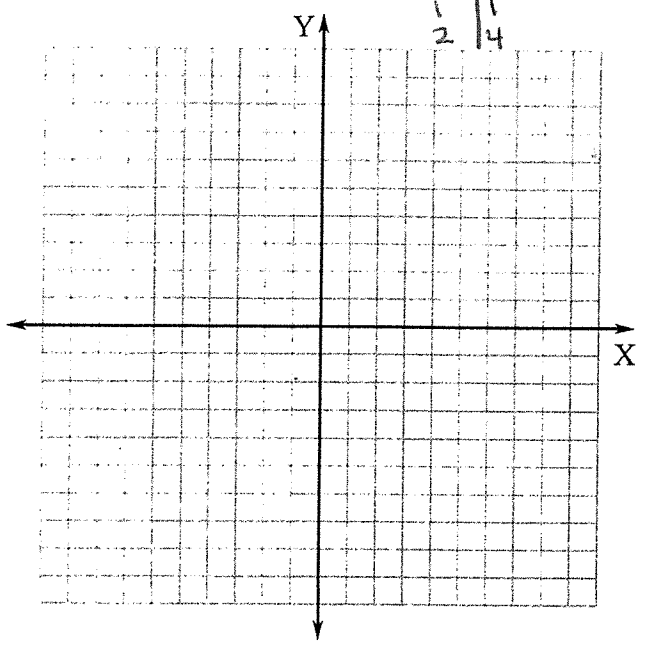
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13.	<p>Solve the following system by elimination. Give your solution as an ordered pair.</p> $x + 4y = 7$ $3x + 5y = 0$	
14.	<p>Solve the following system by elimination. Give the solution as an ordered triple.</p> $x + 2y + 3z = -5$ $2x + y + z = 1$ $x + y - z = 8$	
15.	<p>The following three points are on a parabola. Use a system to create a model to describe the parabola that goes through given points. Given Points: (1,0), (2,6) &amp; (6, -10)</p>	
16.	<p>For the graph shown use a system of equations to create a model to describe the parabola that goes through 3 points on the graph.</p> 	
17.	<p>a) What do you need to find to get a maximum or minimum? b) What do you need to find to get the height from which an object was originally thrown? c) What do you need to find to find out how long an object takes to hit the ground or any given height?</p>	<p>a) b) c)</p>

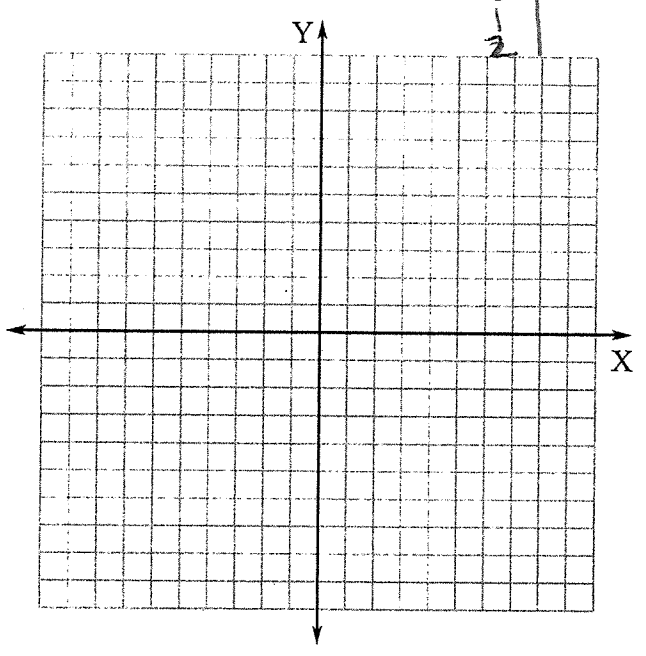
① Graph:  $y = x^2$  using:

x	y
-2	4
-1	1
0	0
1	1
2	4



②<sup>a)</sup> Graph:  $y = x^2 - 2$  b) complete

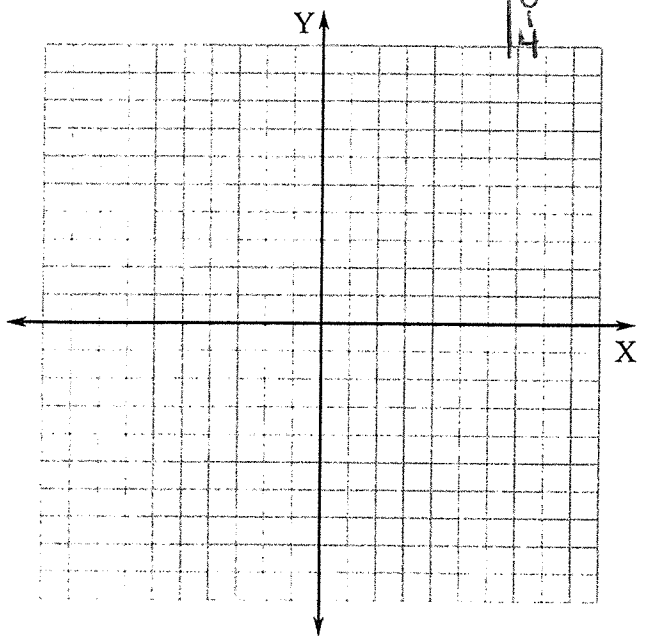
x	y
-2	2
-1	-1
0	-2
1	-1
2	2



Identify vertex:

③<sup>a)</sup> Graph:  $y = (x+2)^2$  b) complete  
c) Identify the vertex

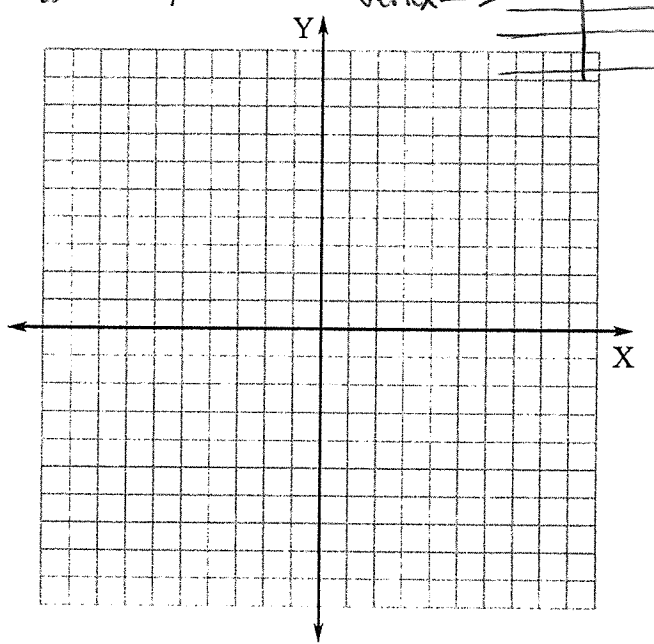
x	y
-2	0
-1	1
0	4



④<sup>a)</sup> Graph:  $y = (x+2)^2 - 2$  b) complete  
Identify Vertex: vertex →

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

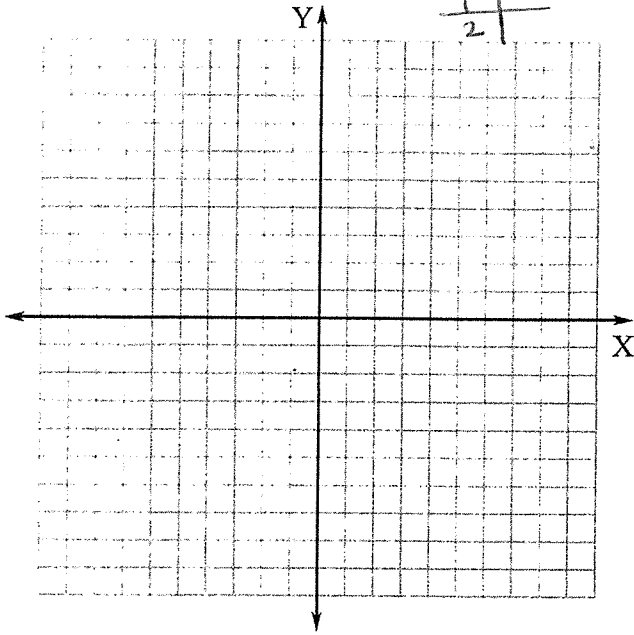
Symmetry



⑤ Graph:  $y = -x^2$

b) Complete

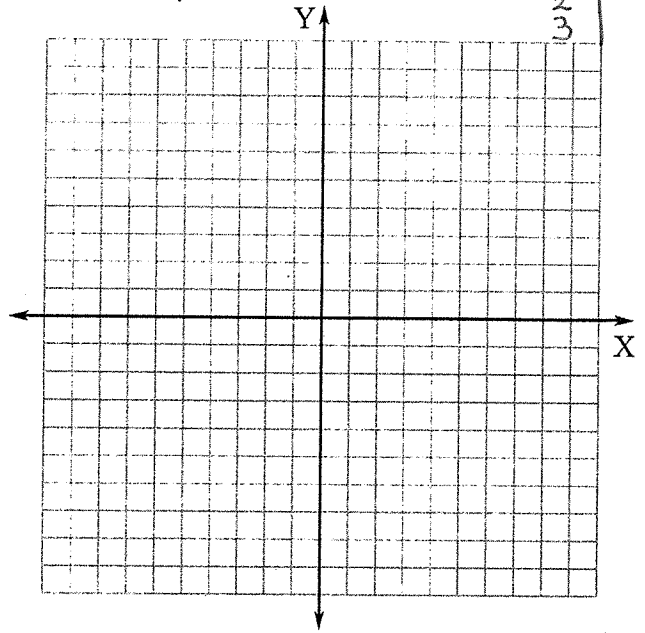
x	y
-2	
-1	
0	
1	
2	



⑥ Graph:  $y = -(x-1)^2 + 4$

b) Complete

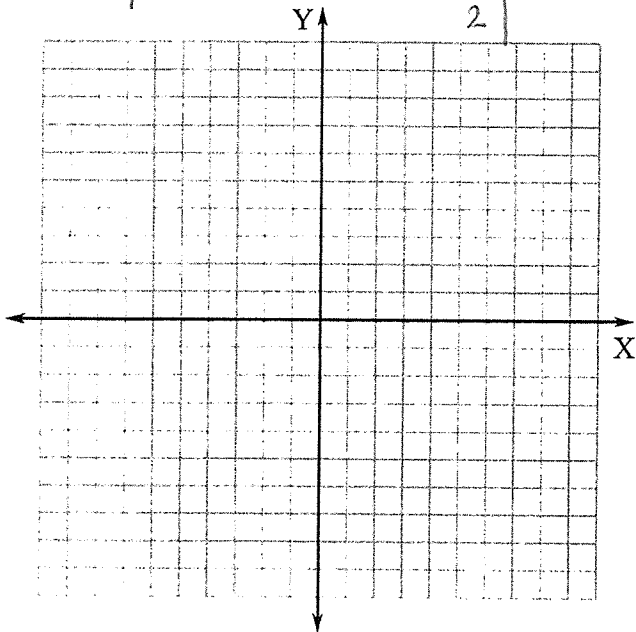
x	y
-1	
0	
1	
2	
3	



⑦<sup>a)</sup> Graph:  $y = -\frac{1}{2}x^2$

b) Complete

x	y
-2	
-1	
0	
1	
2	



⑧<sup>a)</sup> Graph:  $y = -2x^2$

b) Complete

x	y
-2	
-1	
0	
1	
2	

