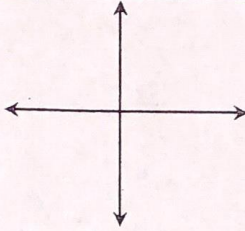
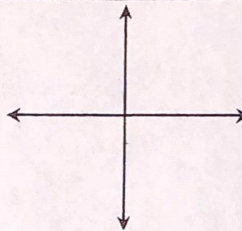
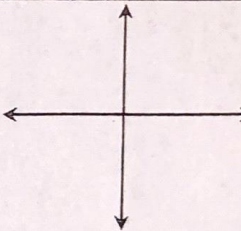


Name: \_\_\_\_\_ Date: \_\_\_\_\_

Topic: \_\_\_\_\_ Class: \_\_\_\_\_

Main Ideas/Questions	Notes/Examples		
<b>QUADRATIC ROOTS</b>			
also called...	_____		
<b>NUMBER OF SOLUTIONS</b>	<b>2 SOLUTIONS</b>	<b>1 SOLUTION</b>	<b>NO SOLUTION</b>
			
<b>THE DISCRIMINANT</b>	Formula: _____ > If $d > 0$ , then there are _____ solutions. > If $d = 0$ , then there are _____ solutions. > If $d < 0$ , then there are _____ solutions.		
<b>EXAMPLES</b>  Use the discriminant to determine the number of solutions.	<b>1.</b> $y = x^2 + 5x + 4$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	<b>2.</b> $y = x^2 - 3x + 10$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	
	<b>3.</b> $y = x^2 + 10x + 25$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	<b>4.</b> $y = 2x^2 - 4x - 3$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	
	<b>5.</b> $y = 4x^2 - 12x + 9$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	<b>6.</b> $y = -3x^2 + 5x - 8$ <input type="checkbox"/> 2 solutions <input type="checkbox"/> 1 solution <input type="checkbox"/> 0 solutions	

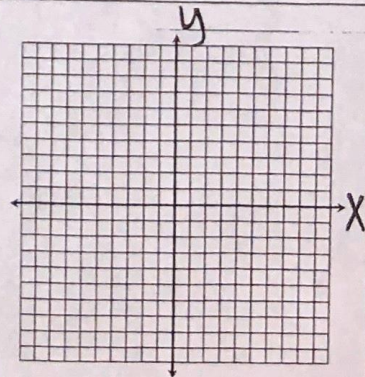
Find the discriminant and identify the # of solutions. Then graph to prove.

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

d = \_\_\_\_\_

solutions: \_\_\_\_\_

x	y
-8	
-7	
-6	
-5	
-4	
-3	
-2	

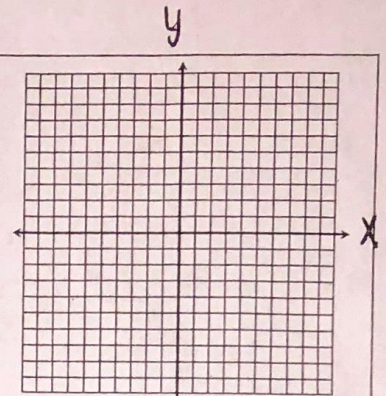


8.  $y = x^2 - 10x + 16$

d:

# of sol: \_\_\_\_\_

x	y
2	
3	
4	
5	
6	
7	
8	

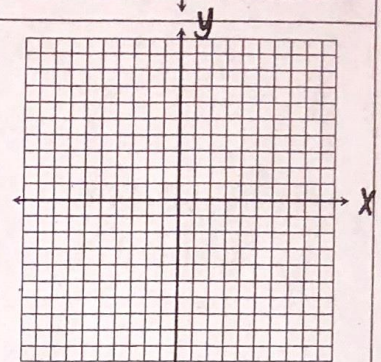


9.  $y = -x^2 + 9$

d:

# of sol: \_\_\_\_\_

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

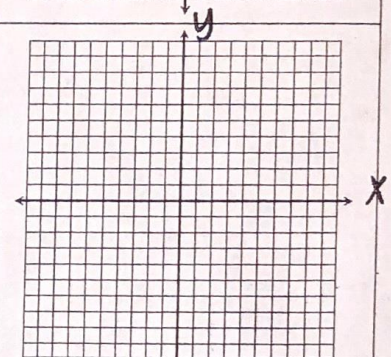


10.  $y = -3x^2 + 6x$

d:

# of sol: \_\_\_\_\_

x	y
-2	
-1	
0	
1	
2	
3	
4	

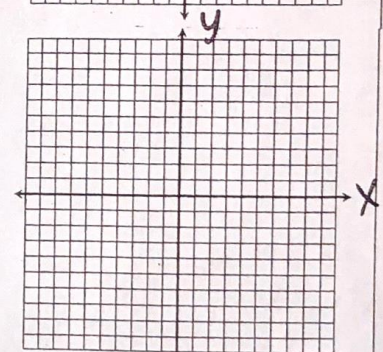


11.  $y = x^2 - 2x + 1$

d:

# of sol: \_\_\_\_\_

x	y
-2	
-1	
0	
1	
2	
3	
4	



12.  $y = -x^2 + 2x - 3$

d:

# of

x	y
-2	
-1	
0	
1	
2	
3	
4	

