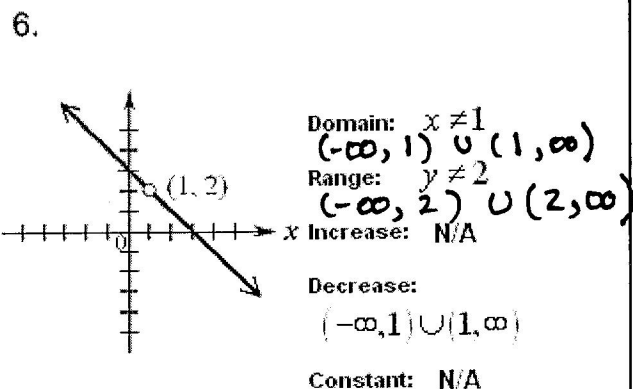
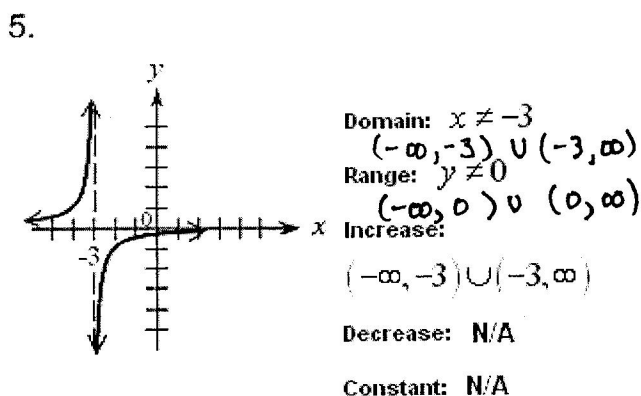
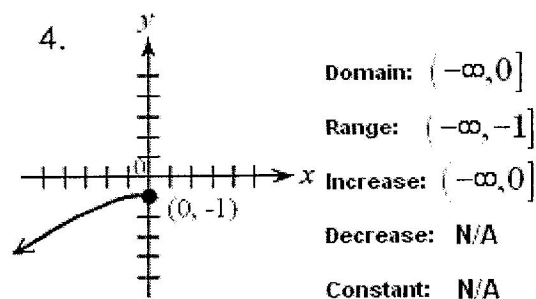
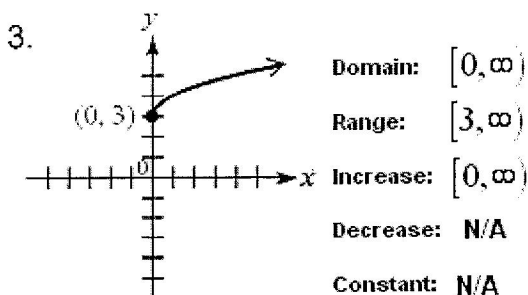
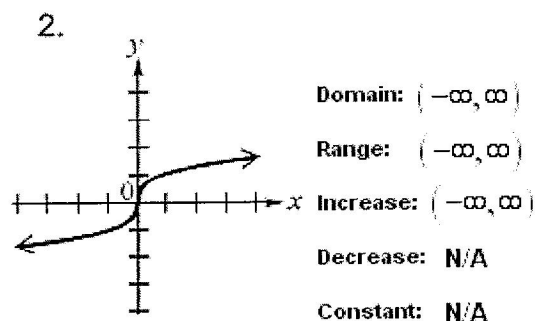
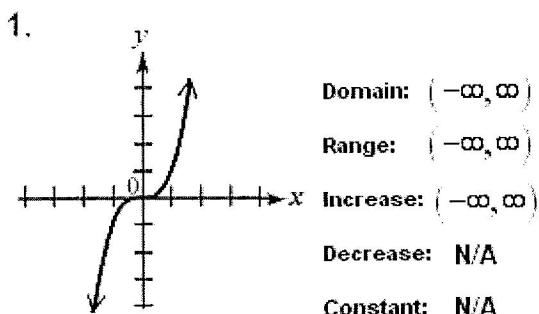
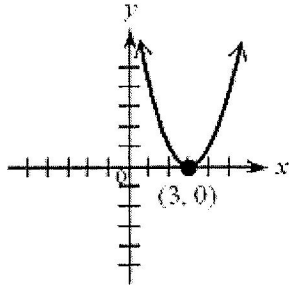


## Increasing & Decreasing Functions

Determine the intervals of the domain over which the function is a) increasing, b) decreasing, and c) constant. Then state the domain and range.

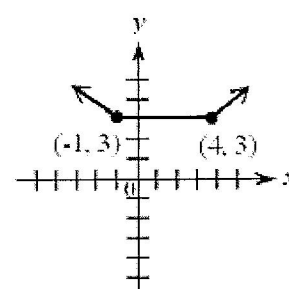


7.



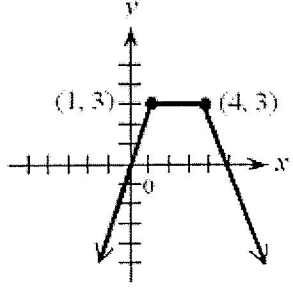
Domain:  $(-\infty, \infty)$   
 Range:  $[0, \infty)$   
 Increase:  $(3, \infty)$   
 Decrease:  $(-\infty, 3)$   
 Constant: N/A

8.



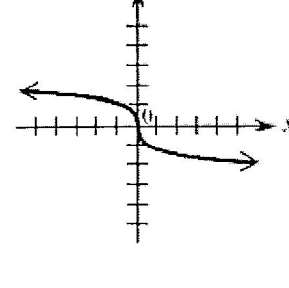
Domain:  $(-\infty, \infty)$   
 Range:  $[3, \infty)$   
 Increase:  $(4, \infty)$   
 Decrease:  $(-\infty, -1)$   
 Constant:  $(-1, 4)$

9.



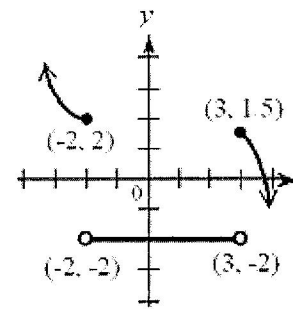
Domain:  $(-\infty, \infty)$   
 Range:  $(-\infty, 3]$   
 Increase:  $(-\infty, 1)$   
 Decrease:  $(4, \infty)$   
 Constant:  $(1, 4)$

10.



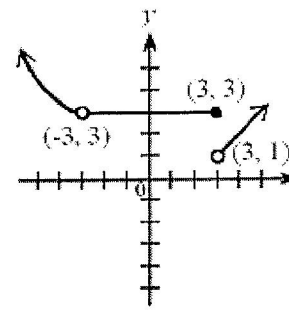
Domain:  $(-\infty, \infty)$   
 Range:  $(-\infty, \infty)$   
 Increase: N/A  
 Decrease:  $(-\infty, \infty)$   
 Constant: N/A

11.



Domain:  $(-\infty, \infty)$   
 Range:  $(-\infty, 1.5] \cup [2, \infty)$   
 Increase: N/A  
 Decrease:  $(-\infty, -2) \cup [3, \infty)$   
 Constant:  $(-2, 3)$

12.



Domain:  $x \neq -3$   
 Range:  $(1, \infty)$   
 Increase:  $(3, \infty)$   
 Decrease:  $(-\infty, -3)$   
 Constant:  $(-3, 3]$