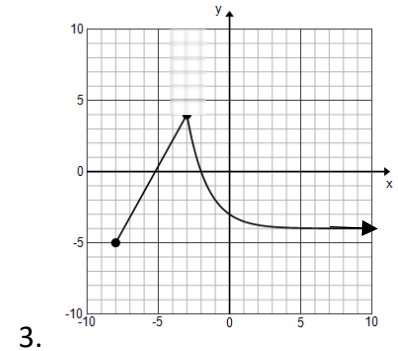
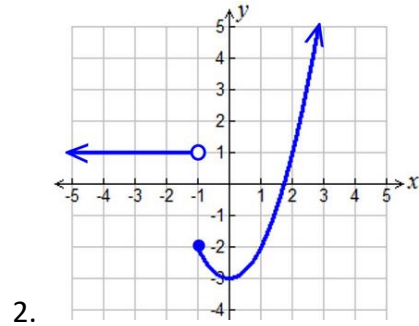
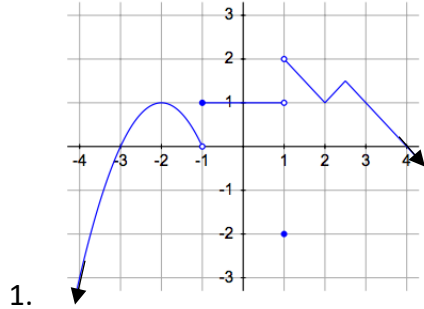


*Sec 1H Unit 5 Day 4 – More Features of Functions Assignment*

State the end behavior of the following functions. Remember that each function will have two end behavior statements.



4. Give the x-intercepts for each of the functions above:

#1

#2

#3

5. Give the y-intercepts for each of the functions above:

#1

#2

#3

6.

Domain:

Range:

Positive:

Negative:

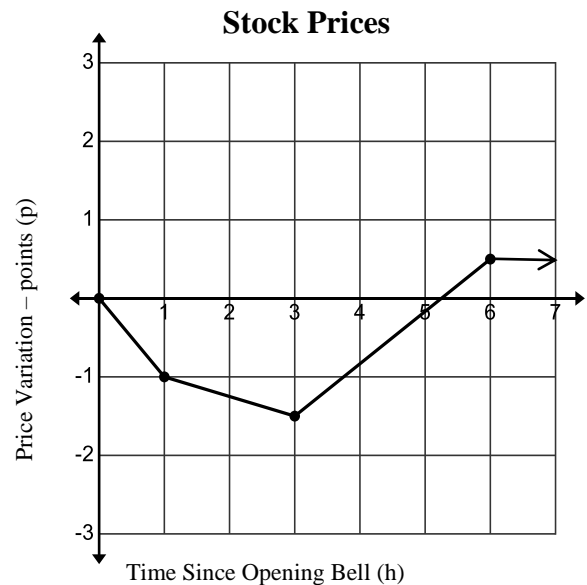
Increasing:

Decreasing:

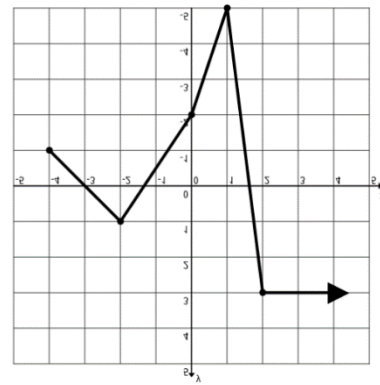
End Behavior:

X-intercept(s):

y-intercept(s):



7. a) When is this function positive?  
 b) When is this function negative?  
 c) When is this function increasing?  
 d) When is this function decreasing?



The following represents a **continuous** function defined on the interval from  $[0, 6]$ .

$x$	$f(x)$
0	2
1	-3
2	0
3	2
4	6
5	12
6	20

8. a) domain  
 b) range  
 c) x-intercept(s)  
 d) y-intercept(s)
9. Based on the table, what is the minimum point?

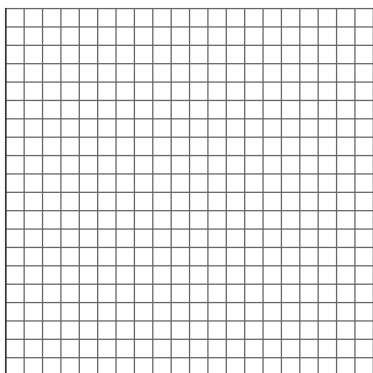
The following represents a **discrete** function defined on the interval from  $[1, 5]$ .

$x$	$f(x)$
1	4
2	10
3	5
4	8
5	3

10. a) domain  
 b) range  
 c) x-intercept(s)  
 d) y-intercept(s)
11. Based on the table, what is the minimum point?

Sketch a graph with the given key features.

12. continuous, nonlinear  
 x-intercepts:  $(1, 0)$  and  $(7, 0)$   
 y-intercept:  $(0, -2)$   
 maximum point:  $(5, 2)$   
 minimum point:  $(10, -6)$   
 increasing:  $-\infty < x < 5$   
 decreasing:  $5 < x < 10$   
 As  $x$  approaches  $-\infty$ ,  $y$  approaches  $-\infty$ .  
 As  $x$  approaches  $\infty$ ,  $y$  does not exist.



13. Linear, continuous, piecewise  
 x-intercept:  $(-3, 0)$   
 y-intercept:  $(0, -4)$   
 no maximum point  
 no minimum point  
 increasing: never  
 decreasing:  $-\infty < x < 0$   
 As  $x$  approaches  $-\infty$ ,  $y$  approaches  $\infty$ .  
 As  $x$  approaches  $\infty$ ,  $y = -4$ .

