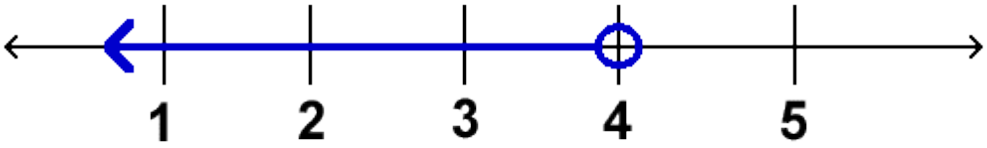
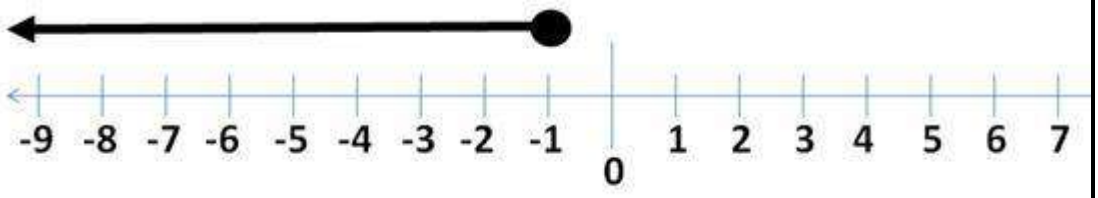
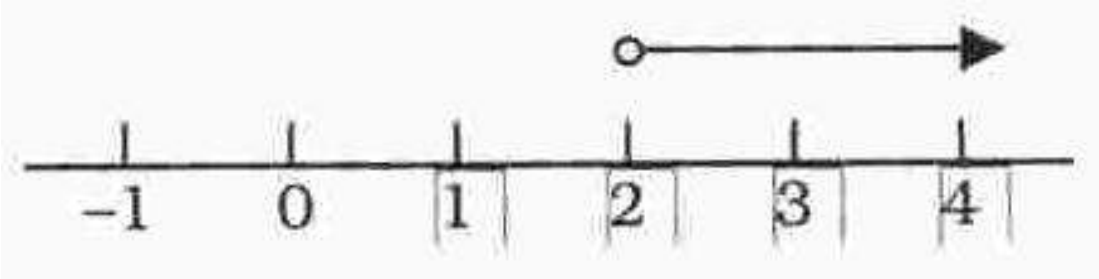
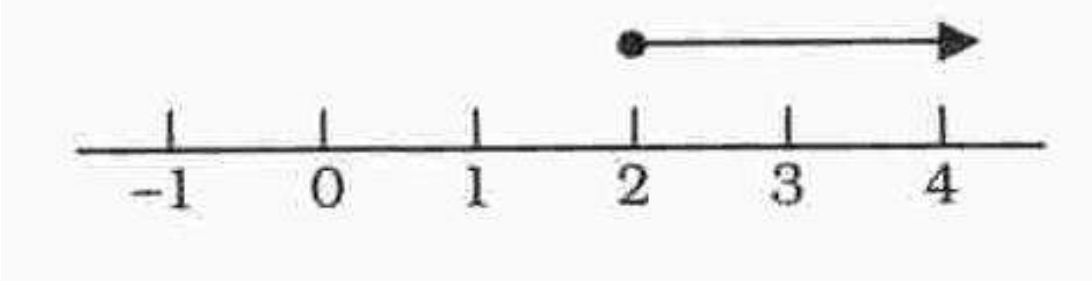
Analysis of Functions

Determine the domain for each number line given below








−1
0
1
2
3
4


3
7


−4
1


−8
−8

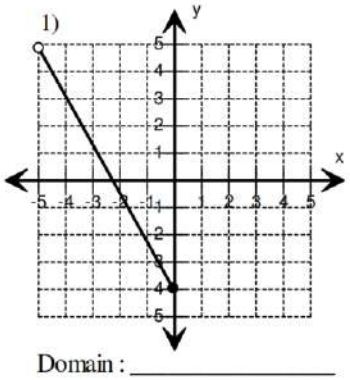

0
1
2


−6
0

Domain and Range

Find the Domain and Range for each graph.

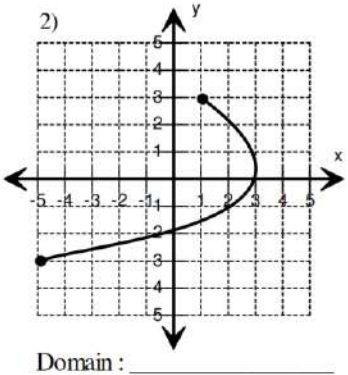
1)



Domain : _____

Range : _____

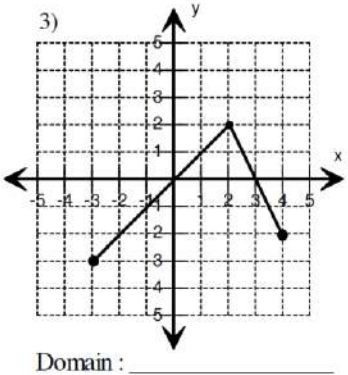
2)



Domain : _____

Range : _____

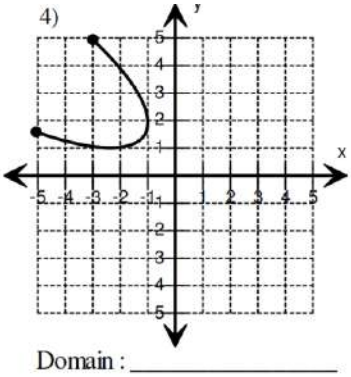
3)



Domain : _____

Range : _____

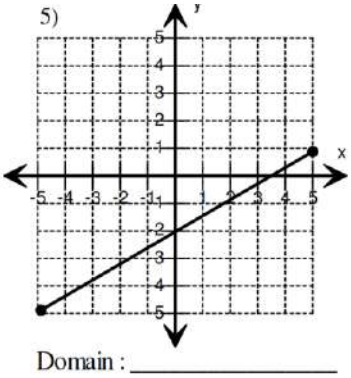
4)



Domain : _____

Range : _____

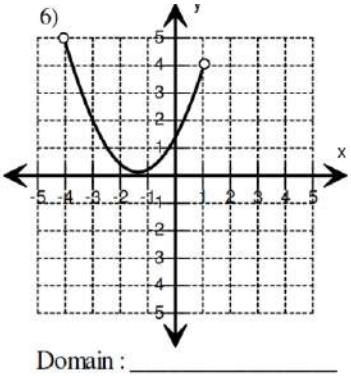
5)



Domain : _____

Range : _____

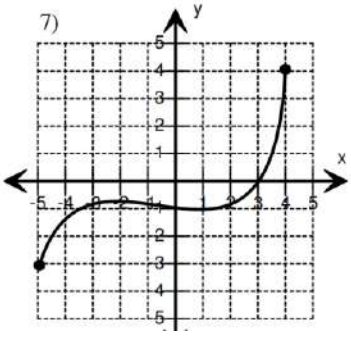
6)



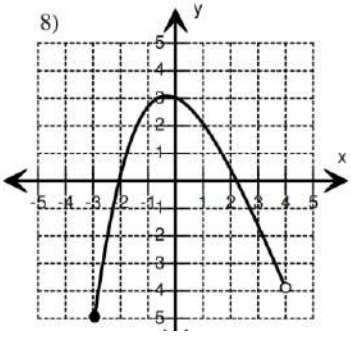
Domain : _____

Range : _____

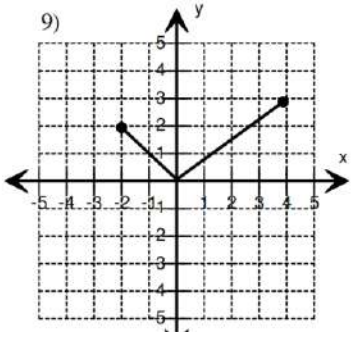
7)



8)



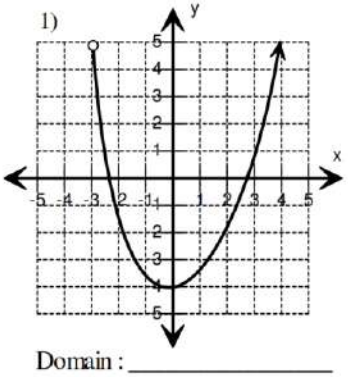
9)



Domain and Range

Find the Domain and Range for each graph.

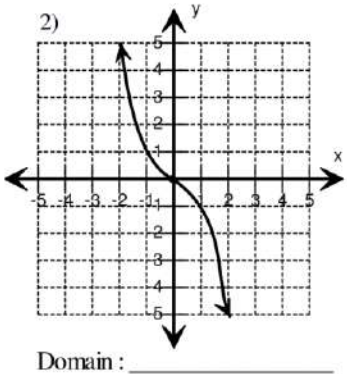
1)



Domain : _____

Range : _____

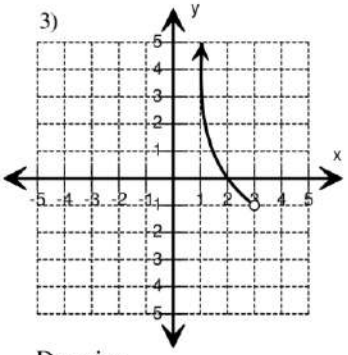
2)



Domain : _____

Range : _____

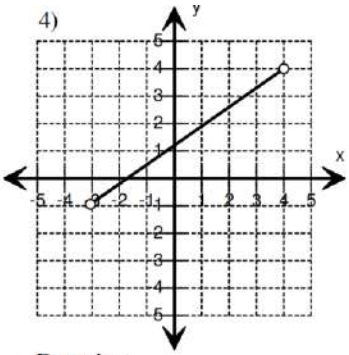
3)



Domain : _____

Range : _____

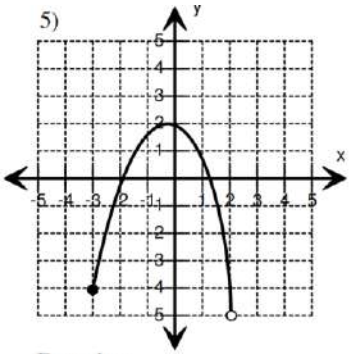
4)



Domain : _____

Range : _____

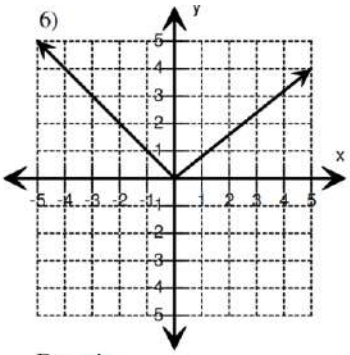
5)



Domain : _____

Range : _____

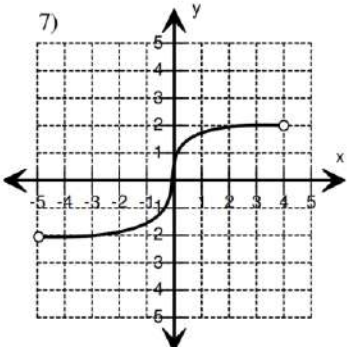
6)



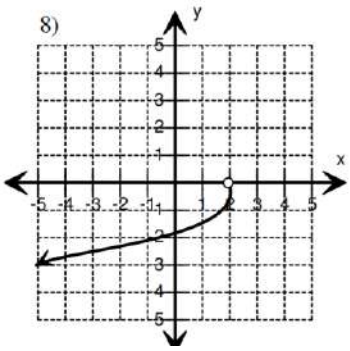
Domain : _____

Range : _____

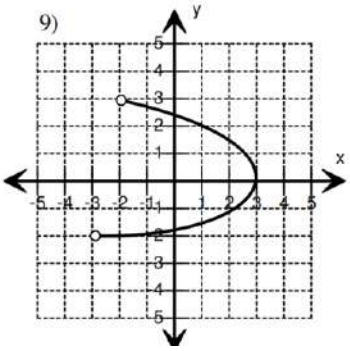
7)



8)



9)

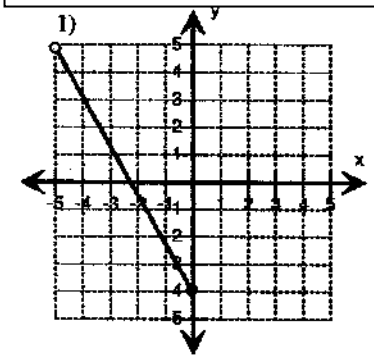


Name: _____ Score: _____

Intercepts

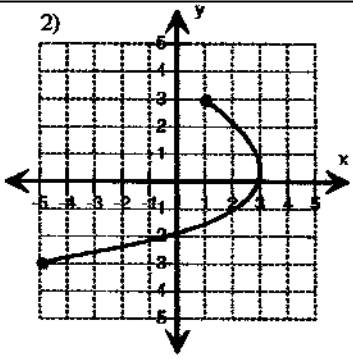
Directions: For each graph find the x-intercept and the y-intercept.

1)



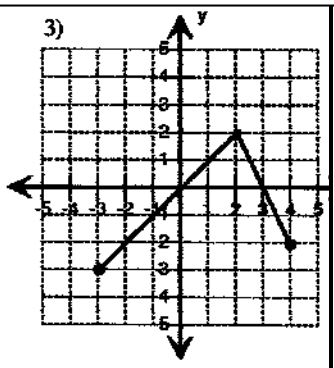
x-intercept:
y-intercept:

2)



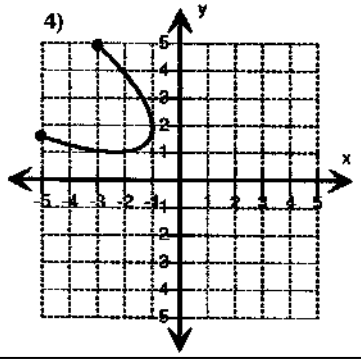
x-intercept:
y-intercept:

3)



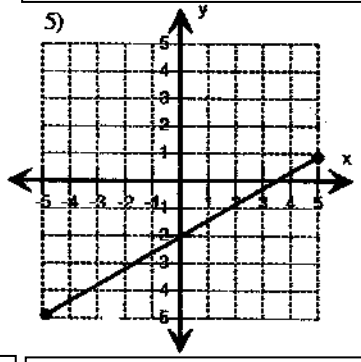
x-intercept:
y-intercept:

4)



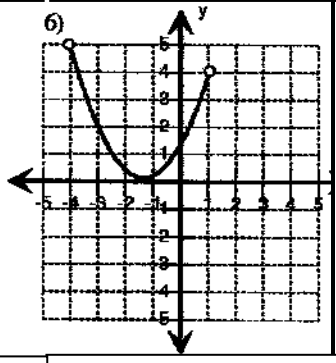
x-intercept:
y-intercept:

5)



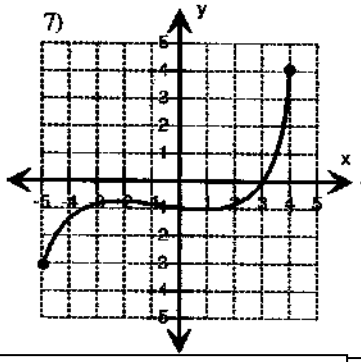
x-intercept:
y-intercept:

6)



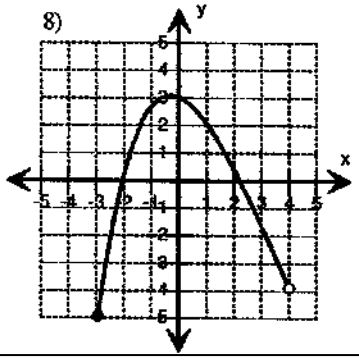
x-intercept:
y-intercept:

7)



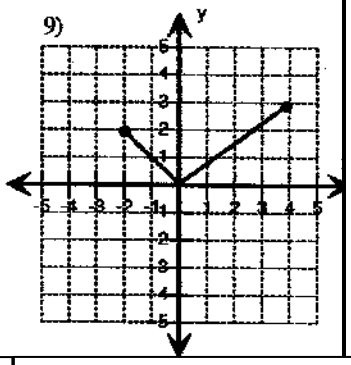
x-intercept:
y-intercept:

8)



x-intercept:
y-intercept:

9)

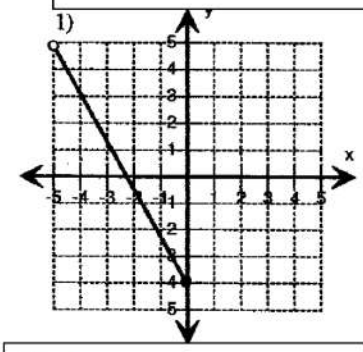


x-intercept:
y-intercept:

Maximums and Minimums

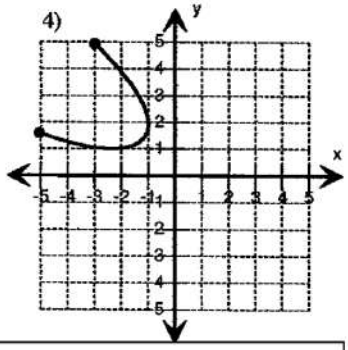
Directions: For each graph find the absolute maximum and minimum.

1)

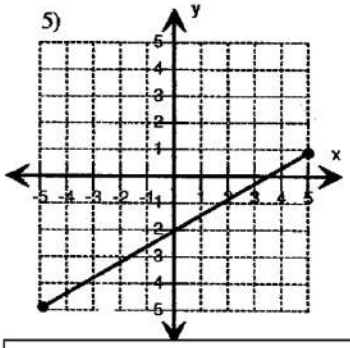


Maximum:	Maximum:	Maximum:
Minimum:	Minimum:	Minimum:

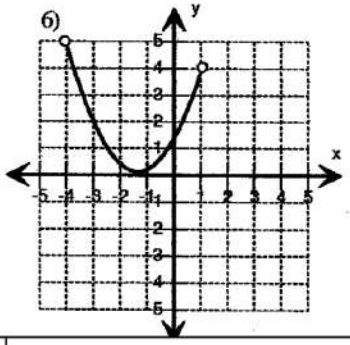
4)



5)

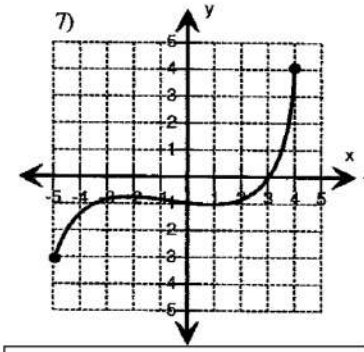


6)

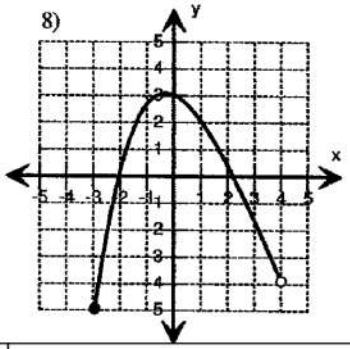


Maximum:	Maximum:	Maximum:
Minimum:	Minimum:	Minimum:

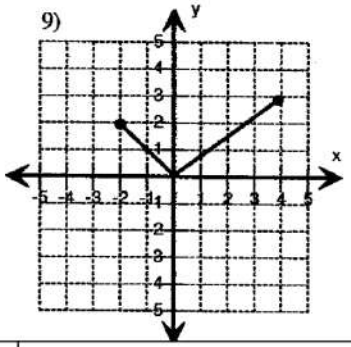
7)



8)



9)

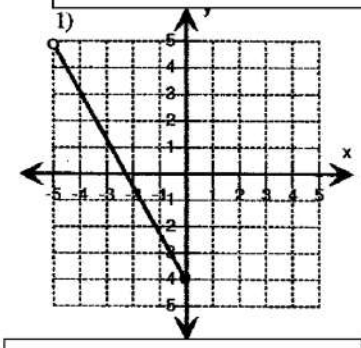


Maximum:	Maximum:	Maximum:
Minimum:	Minimum:	Minimum:

Intervals of Increase and Decrease

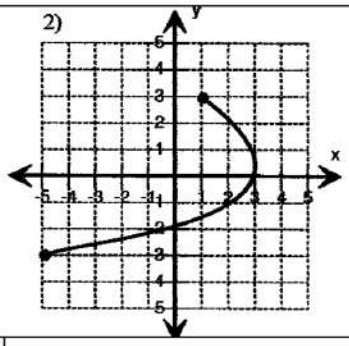
Directions: For each graph that is a function, find the intervals of increase and decrease.

1)



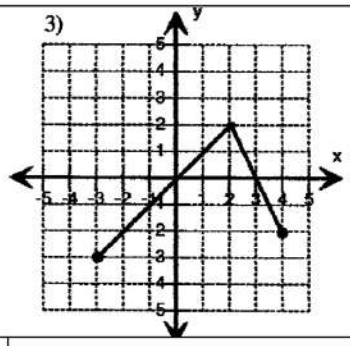
Increase:	Decrease:

2)



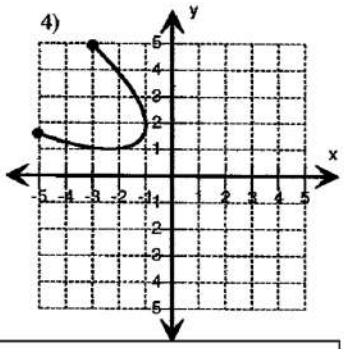
Increase:	Decrease:

3)



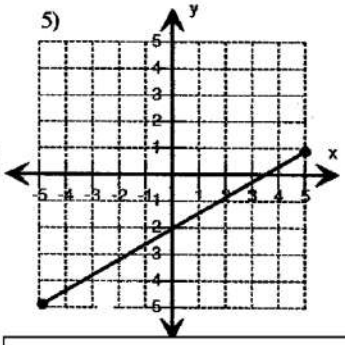
Increase:	Decrease:

4)



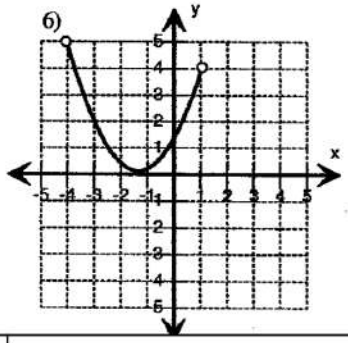
Increase:	Decrease:

5)



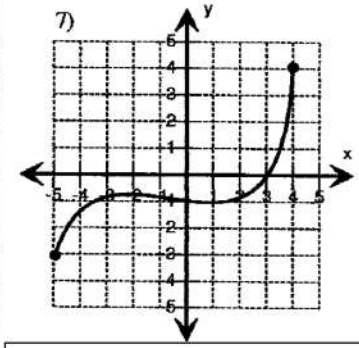
Increase:	Decrease:

6)



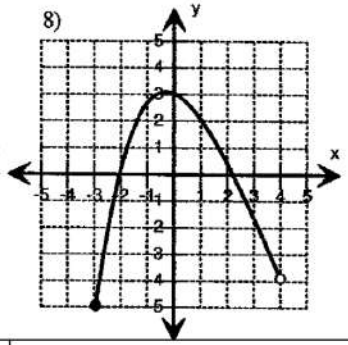
Increase:	Decrease:

7)



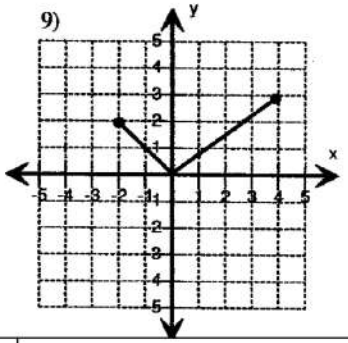
Increase:	Decrease:

8)



Increase:	Decrease:

9)

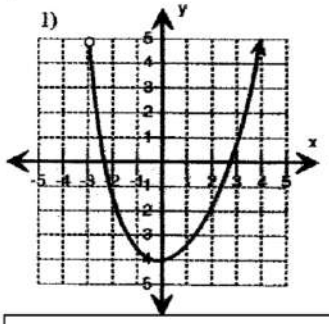


Increase:	Decrease:

Intervals of Increase and Decrease

Directions: For each graph that is a function, find the intervals of increase and decrease.

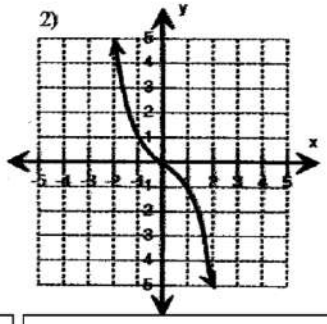
1)



Increase:

Decrease:

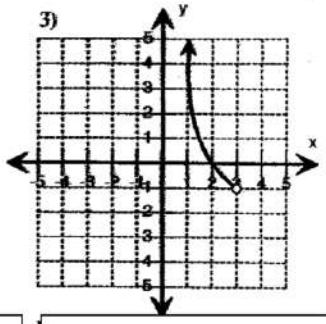
2)



Increase:

Decrease:

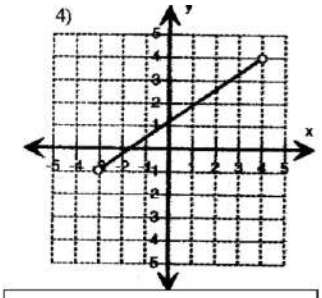
3)



Increase:

Decrease:

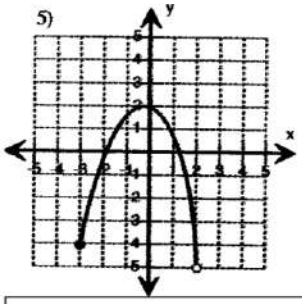
4)



Increase:

Decrease:

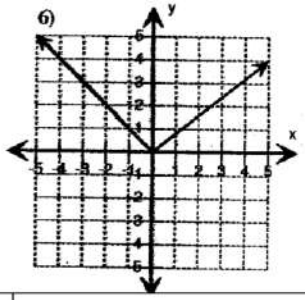
5)



Increase:

Decrease:

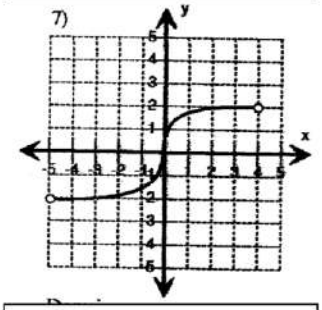
6)



Increase:

Decrease:

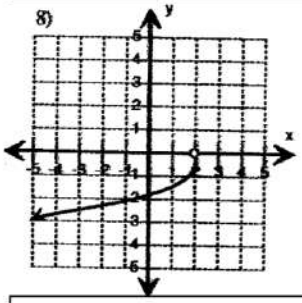
7)



Increase:

Decrease:

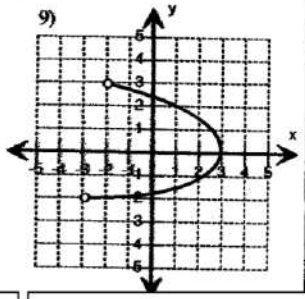
8)



Increase:

Decrease:

9)

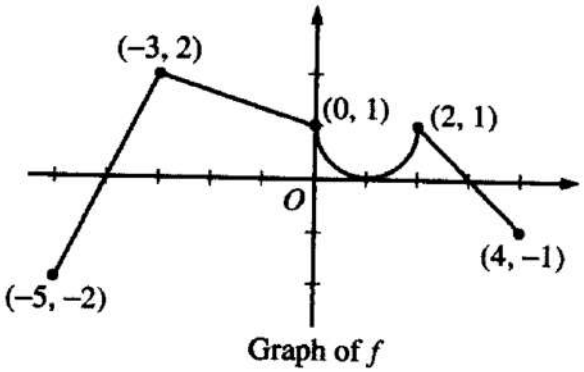


Increase:

Decrease:

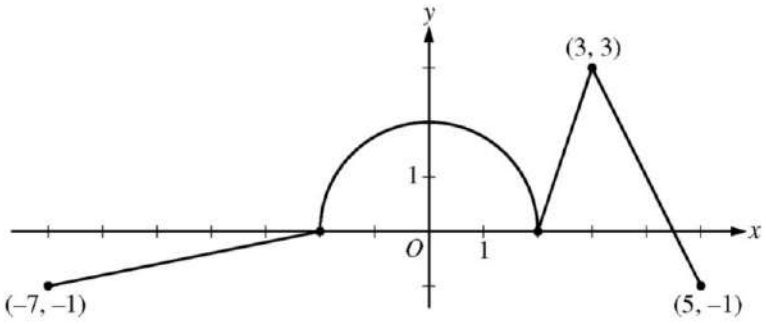
1. Find d(0) =
2. Find d(1) =
3. Find d(4) =
4. Find d(t) = 0
5. Find d(t) = 3
6. Find d(t) = 2

Determine the function values by looking at the graphs below.



Graph of *f*

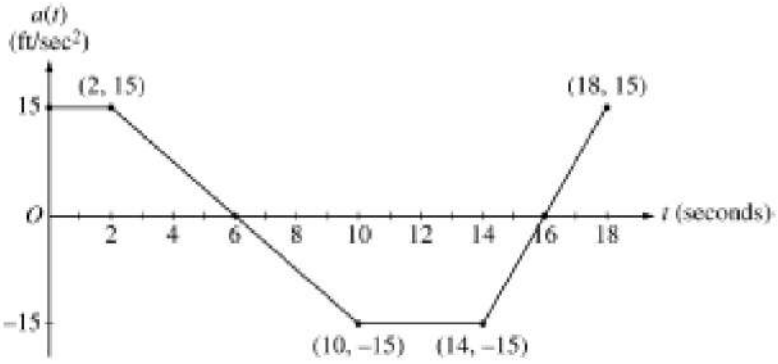
1. Find f(0) =
2. Find f(-3) =
3. Find d(2) =
4. Find f(x) = -2
5. Find f(x) = 1
6. Find f(x) = 0



x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

1. What is the domain of f(x)?

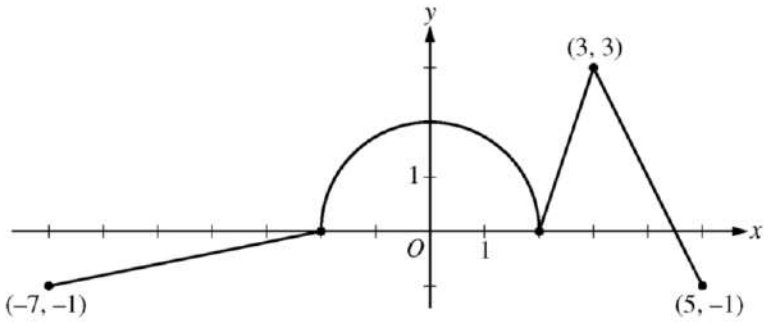
2. What is the range of f(x)?



t	a(t)
0	15
2	15
6	0
10	-15
14	-15
16	0
18	15

1. What is the domain of a(t)?

2. What is the range of a(t)?



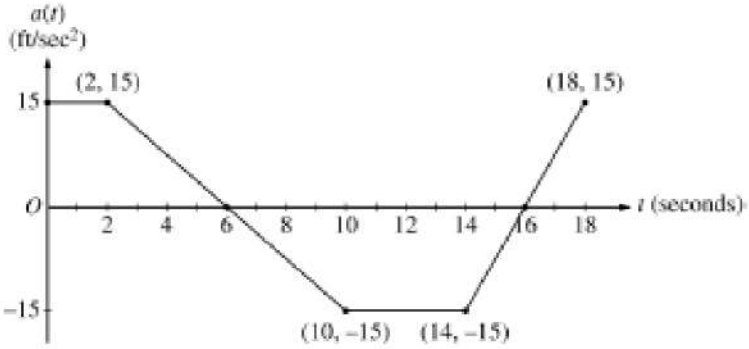
x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

1. What are the coordinates of the point where f(x) has an absolute maximum value?

2. What are the coordinates of the point where f(x) has an absolute minimum value?

3. Find the x-intercept.

4. Find the y-intercept.



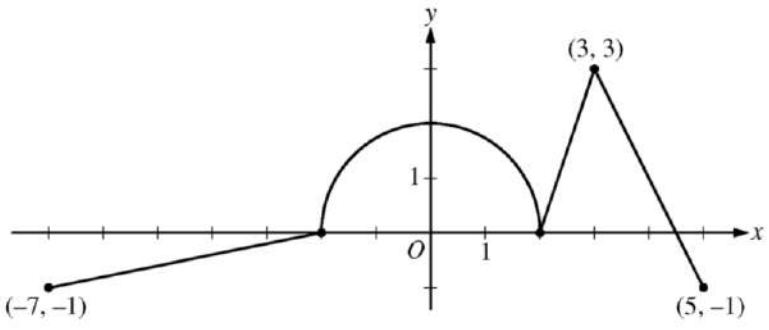
t	a(t)
0	15
2	15
6	0
10	-15
14	-15
16	0
18	15

1. What are the coordinates of the point where a(t) has an absolute maximum value?

2. Find the x-intercept.

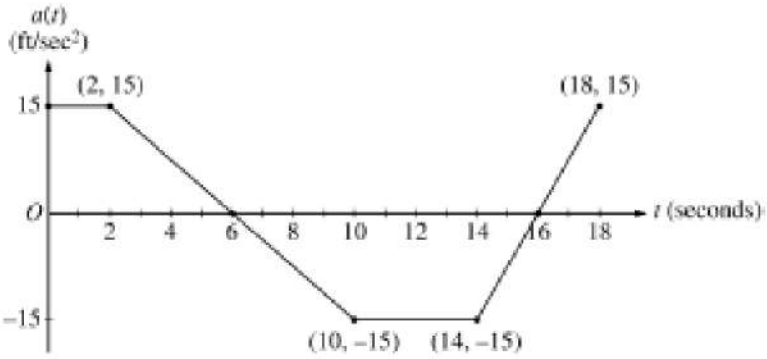
3. What are the coordinates of the point where a(t) has an absolute minimum value?

4. Find the y-intercept.



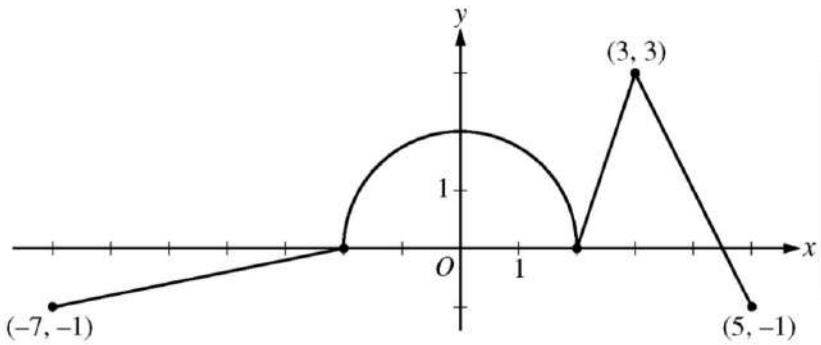
x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

1. Is f(x) continuous?
2. On what interval is f(x) constant?
3. On what intervals is f(x) increasing?
4. On what intervals is f(x) decreasing?



t	a(t)
0	15
2	15
6	0
10	-15
14	-15
16	0
18	15

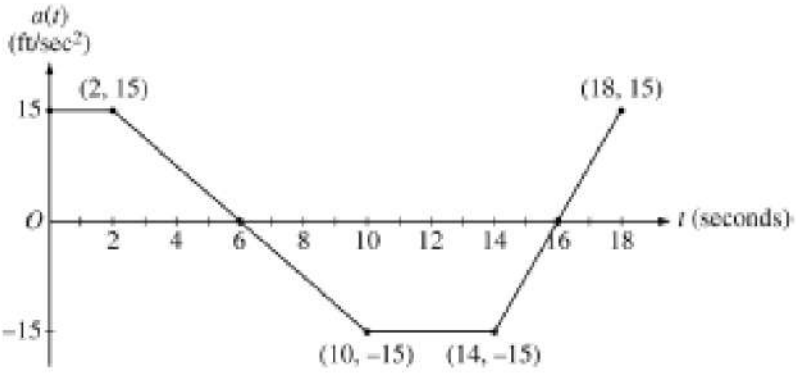
1. Is a(t) continuous?
2. On what interval is a(t) constant?
3. On what intervals is a(t) increasing?
4. On what intervals is a(t) decreasing?



x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

1. For what values is $f(x) < 0$?

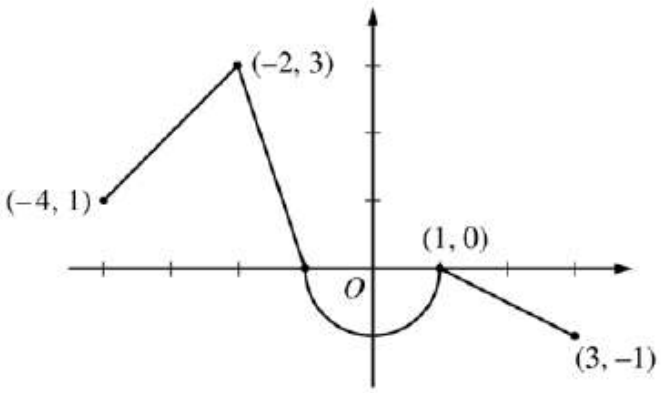
2. For what values is $f(x) > 0$?



t	a(t)
0	15
2	15
6	0
10	-15
14	-15
16	0
18	15

1. For what values is $f(x) < 0$?

2. For what values is $f(x) > 0$?



Graph of f

1. Determine if the graph of f(x) is a function? Justify your answer?

2. What is the value of f(-1) ?

3. What is the value of f(0) ?

4. What is the value of x when f(x) = 3

5. What is the value of x when f(x) = -1

6. What are the coordinates of the point where f(x) has an absolute maximum value?

7. What are the coordinates of the point where f(x) has an absolute minimum value?

8. Is f(x) continuous?

9. On what interval is f(x) constant?

10. On what intervals is f(x) increasing?

11. On what intervals is f(x) decreasing?

12. For what values is d(t) > 0?

13. Find the average rate of change between x = -2 and x = 1.

14. For what values is d(t) ≤0?

15. Give the x-intercept(s) of f(x)

16. Give the y-intercept(s) of f(x)

17. What is the domain of f(x)?

18. What is the range of f(x)?