x-intercept
↳ where graph crosses x-axis
↳ zero
↳ $y = 0$

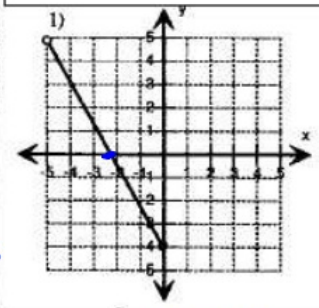
y-intercept
↳ where graph crosses y-axis
↳ $x = 0$

Name: _____ Score: _____

Intercepts Where Graph Crosses x and/or y axis

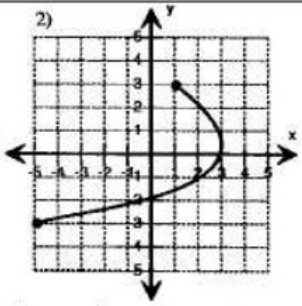
Directions: For each graph find the x-intercept and the y-intercept.

1)



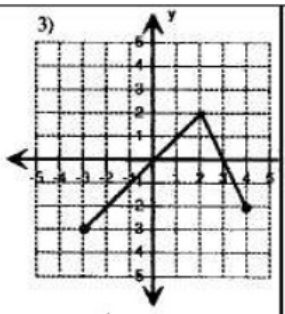
x-intercept: $(-2.1, 0)$
y-intercept: $(0, -4)$

2)



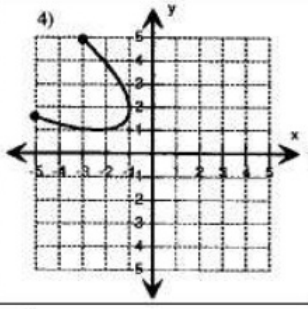
x-intercept: $(3, 0)$
y-intercept: $(0, -2)$

3)



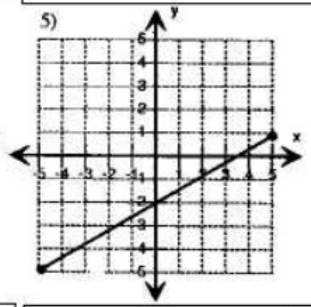
x-intercept: $(0, 0)$ $(3, 0)$
y-intercept: $(0, 0)$

4)



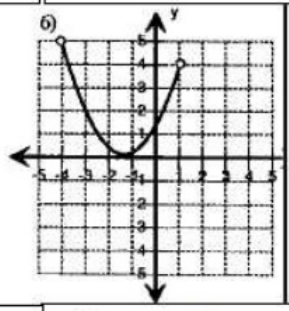
x-intercept: None
y-intercept: None

5)



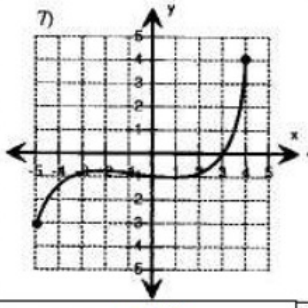
x-intercept: $(3.5, 0)$
y-intercept: $(0, -2)$

6)



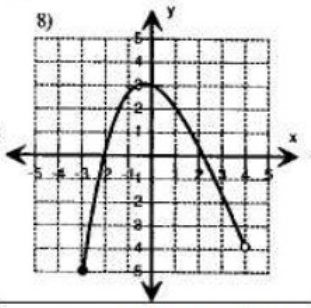
x-intercept: $(-1.5, 0)$
y-intercept: $(0, 1.5)$

7)



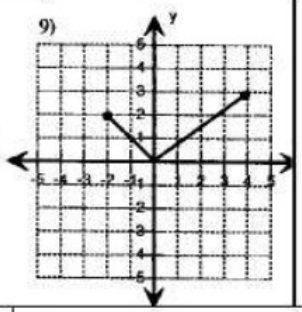
x-intercept: $(3, 0)$
y-intercept: $(0, -1)$

8)



x-intercept: $(-2, 0)$ $(2, 0)$
y-intercept: $(0, 3)$

9)



x-intercept:
y-intercept:

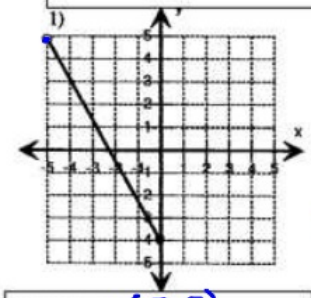
Max highest y-value

min – lowest y-value

Maximums and Minimums

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

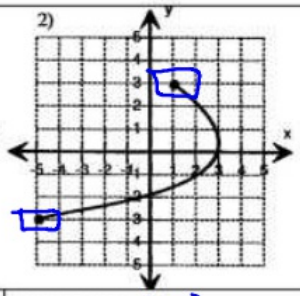
1)



Maximum: (-5,5)

Minimum: (0,-4)

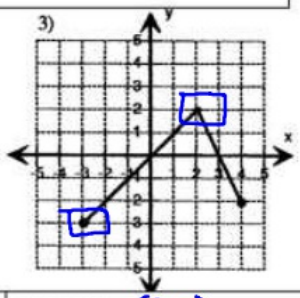
2)



Maximum: (1,3)

Minimum: (-5,-3)

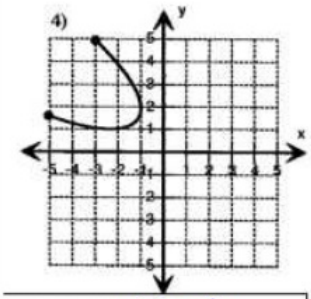
3)



Maximum: (2,2)

Minimum: (-3,-3)

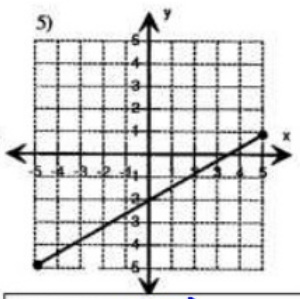
4)



Maximum: (-3,5)

Minimum: (-2,1)

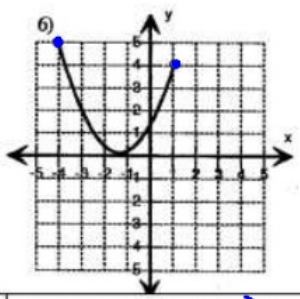
5)



Maximum: (5,1)

Minimum: (-5,-5)

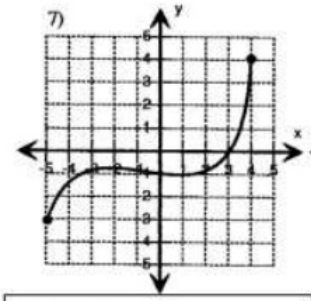
6)



Maximum: (-4,5)

Minimum: (-1.2,0)

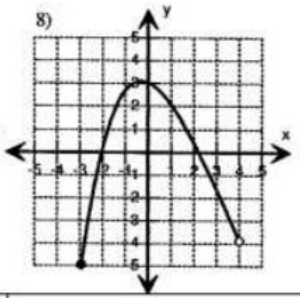
7)



Maximum:

Minimum:

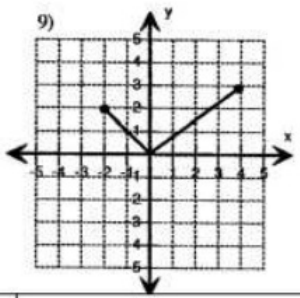
8)



Maximum:

Minimum:

9)



Maximum:

Minimum:

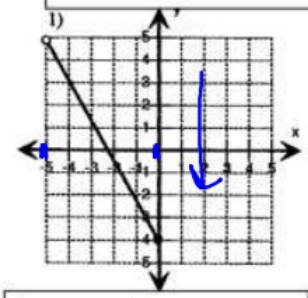
Increase/Decrease
Y-Values
Left → Right

Use x-values in answer

Intervals of Increase and Decrease

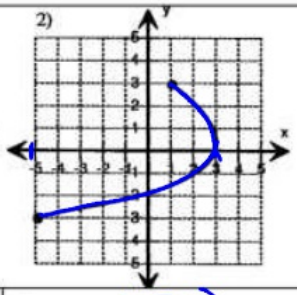
Directions: For each graph that is a function, find the intervals of increase and decrease.

1)



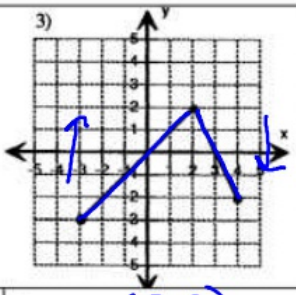
Increase: None
Decrease: (-5,0)

2)



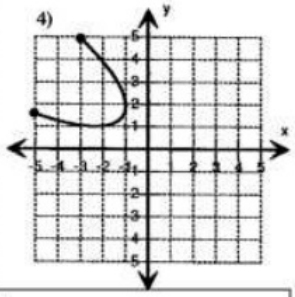
Increase: (-5,3)
Decrease: None

3)



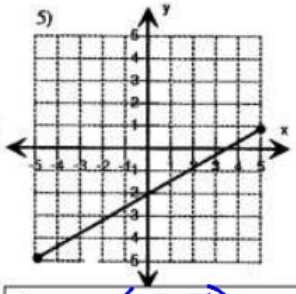
Increase: (-3,2)
Decrease: (2,4)

4)



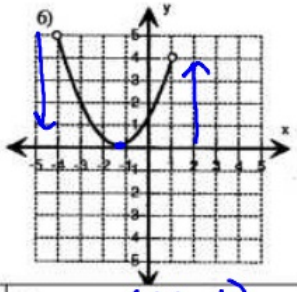
Increase:
Decrease:

5)



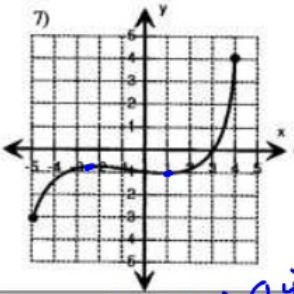
Increase: (-5,5)
Decrease: None

6)



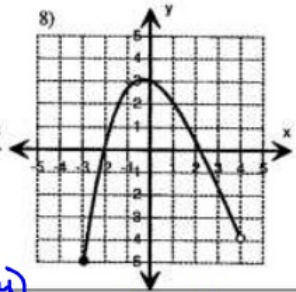
Increase: (-1.1, 1)
Decrease: (-4,-1.1)

7)



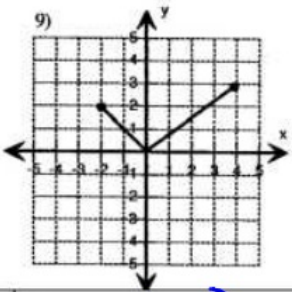
Increase: (-5, -2.5) (1,4)
Decrease: (-2.5;1)

8)



Increase: (-3,0)
Decrease: (0,4)

9)

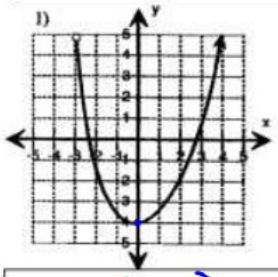


Increase: (0,4)
Decrease: (-2,0)

Intervals of Increase and Decrease

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

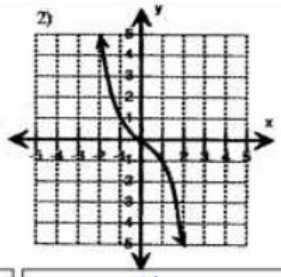
1)



Increase: $(0, \infty)$

Decrease: $(-3, 0)$

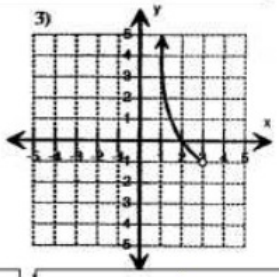
2)



Increase: None

Decrease: $(-\infty, \infty)$

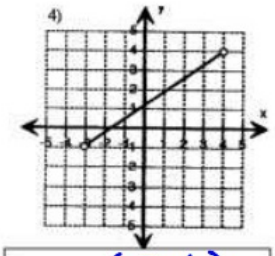
3)



Increase: None

Decrease: $(-\infty, 3)$

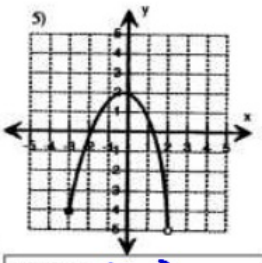
4)



Increase: $(-3, 4)$

Decrease: None

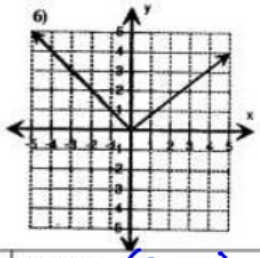
5)



Increase: $(-3, 0)$

Decrease: $(0, 2)$

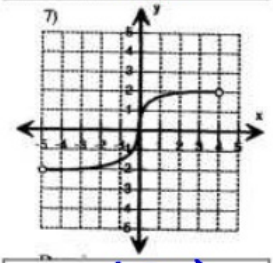
6)



Increase: $(0, \infty)$

Decrease: $(-\infty, 0)$

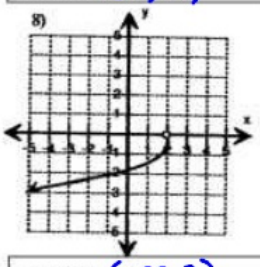
7)



Increase: $(-5, 4)$

Decrease: None

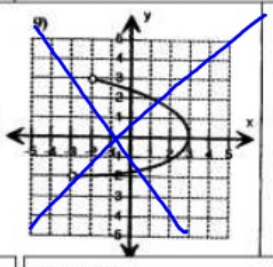
8)



Increase: $(-\infty, 2)$

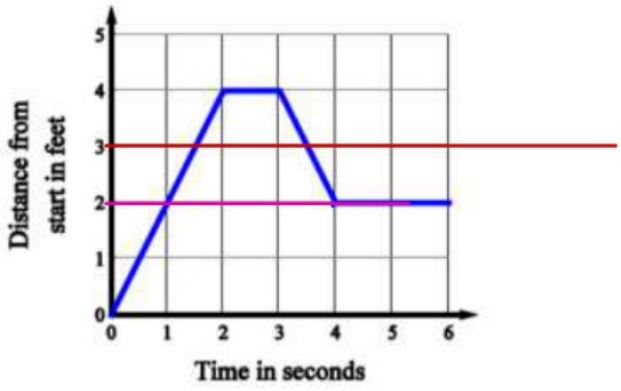
Decrease: None

9)



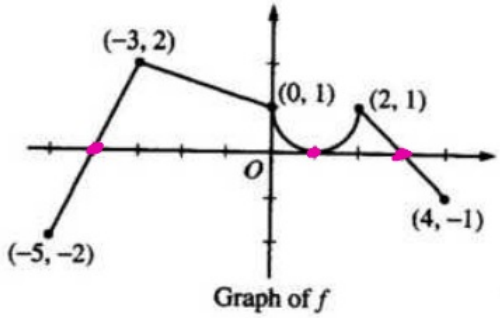
Increase:

Decrease:



1. Find d(0) = 0
2. Find d(1) = 2
3. Find d(4) = 2
4. Find d(t) = 0 — t = 0
5. Find d(t) = 3 — t = 1.5, 3.5
6. Find d(t) = 2 — t = 1, 4 ≤ t ≤ 6

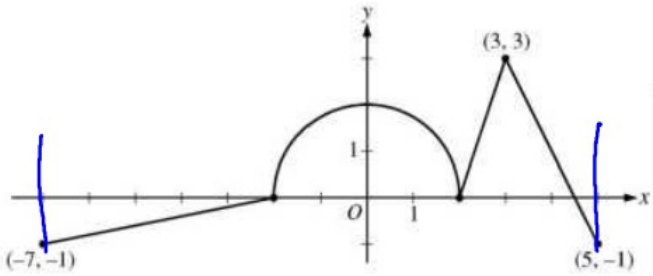
Determine the function values by looking at the graphs below.



Graph of *f*

$f(x) = y$ ← y-value; ↓ x-value

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



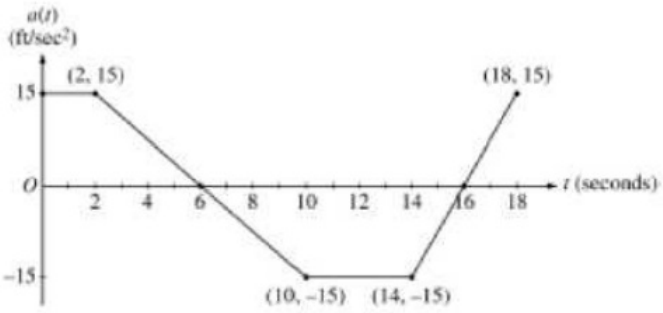
x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

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

[-7, 5]

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

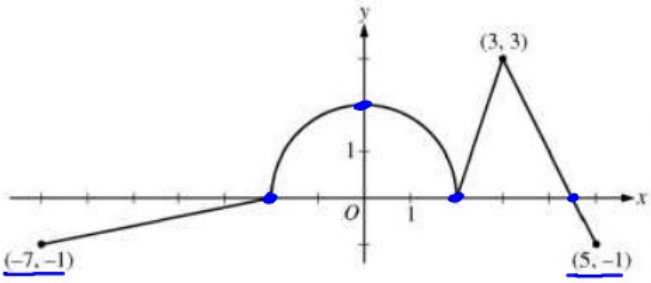
[-1, 3]



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?

(3,3)

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

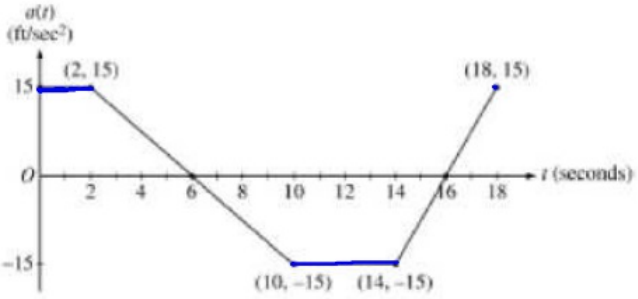
(-7,-1) (5,-1)

3. Find the x-intercept.

(-2,0) (2,0)
(4.5,0)

4. Find the y-intercept.

(0,2)



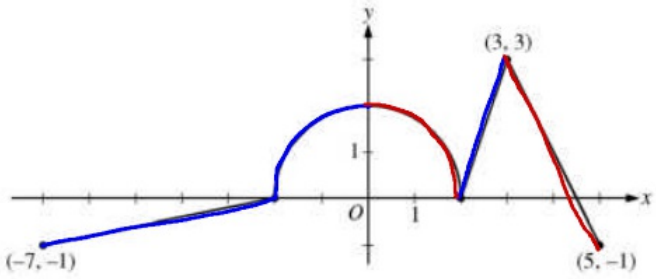
t	a(t)
0	15
2	15
6	0
10	-15
14	-15
16	0
18	15

1. What are the coordinates of the point where a(t) has an absolute maximum value? $0 \le t \le 2$, $t = 18$

2. Find the x-intercept.

3. What are the coordinates of the point where a(t) has an absolute minimum value? $10 \le t \le 14$

4. Find the y-intercept.



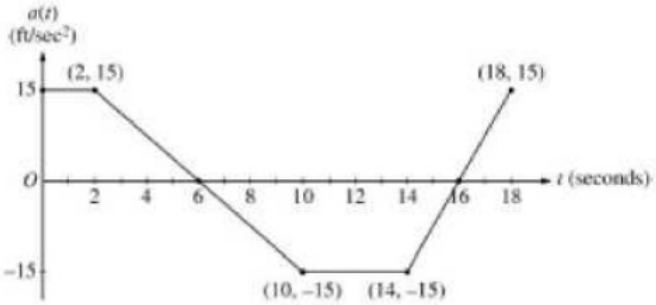
x	f(x)
-7	-1
-2	0
0	2
2	0
3	3
5	-1

1. Is f(x) continuous? Yes

2. On what interval is f(x) constant?
None

3. On what intervals is f(x) increasing?
(-7, 0) (2, 3)

4. On what intervals is f(x) decreasing?
(0, 2) (3, 5)



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

1. Is a(t) continuous? Yes

2. On what interval is a(t) constant?
(0, 2) (10, 14)

3. On what intervals is a(t) increasing?
(14, 18)

4. On what intervals is a(t) decreasing?
(2, 10)