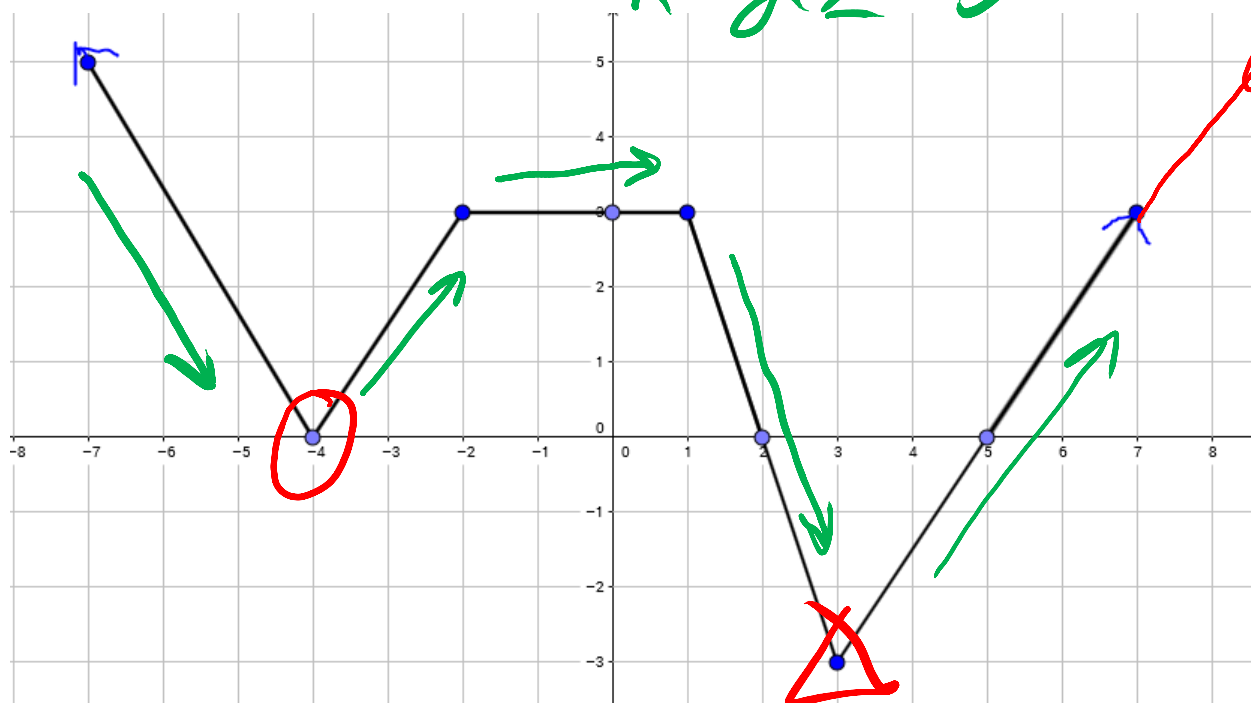


Determine the following based on the graph

$D: \mathbb{R}$
 $R: y \geq -3$



What are the x-intercepts?

$-4, 2, 5$

What are the y-intercepts?

3

Increasing Intervals:

$-4 < x < -2$ and $x > 3$

Decreasing Intervals:

$x < -4$ and $1 < x < 3$

Constant Intervals:

$-2 < x < 1$

$f(1) =$

3

$f(-7) =$

5

$f(x) = -3$

$x = 3$

Positive Intervals:

$x < 2$ and $x > 5$

Negative Intervals:

$2 < x < 5$

Put circle any relative minimums

$(-4, 0)$

Put an X over any relative maximums

none

Put a triangle on absolute minimums

$(3, -3)$

Put a star on absolute maximums

none

$f(-1) =$

3

$f(x) = 5$, Find x.

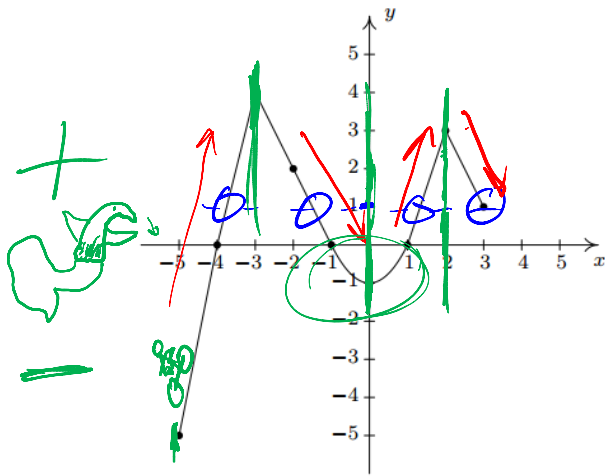
-7

Write the end-behavior for both right and left?

As x decreases, y increases
 As x increases, y increases

Graphs of Functions

Use the following function to answer the questions:



A) What is the domain of f

$$-5 \leq x \leq 3$$

B) Find the range of f

$$-5 \leq y \leq 4$$

C) Determine $f(-2)$.

$$2$$

D) Solve $f(x) = 4$

$$x = -3$$

E) List any x-intercepts

$$(-1, 0), (1, 0), (-4, 0)$$

F) List the y-intercepts

$$-1 \quad (0, -1)$$

G) How many solutions of $f(x) = 1$?

$$4$$

H) List the intervals increase

$$-5 < x < -3 \text{ and } 0 < x < 2$$

I) List the intervals where f is decreasing

$$-3 < x < 0 \text{ and } 2 < x < 3$$

J) When is f negative?

$$-5 < x < -4 \text{ and } -1 < x < 1$$

K) When is f positive

$$-4 < x < -1 \text{ and } 1 < x < 3$$

L) Name and List all Extreme points

$$\text{rel min: } (0, -1) \text{ and } (3, 1)$$

$$\text{rel max: } (2, 3)$$

$$\text{Abs Min: } (-5, -5)$$

$$\text{Abs Max: } (-3, 4)$$