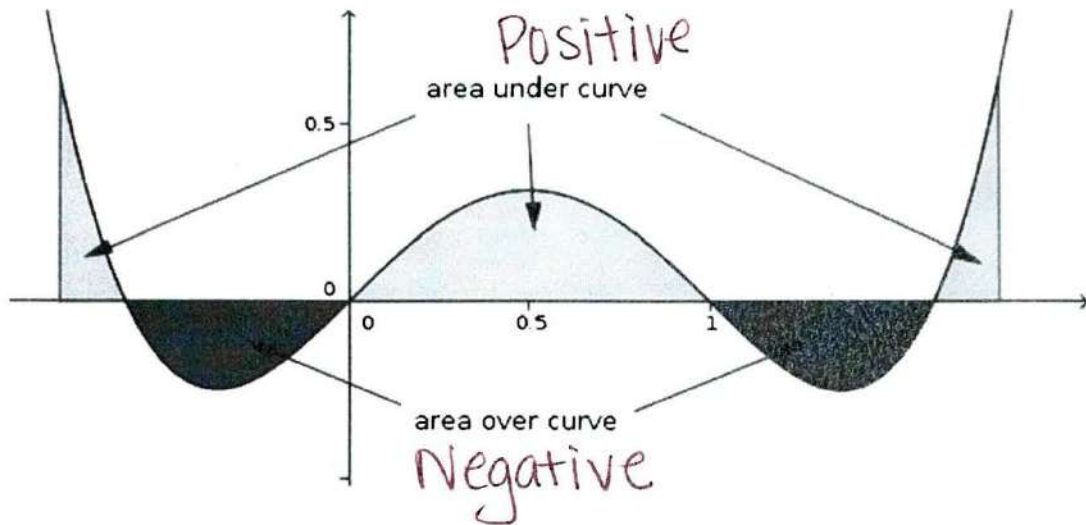


U10 Day 2 Notes Positive and Negative on an Interval

F-IF.4: I can interpret key features of graphs including domain and range, intercepts; intervals where the function is increasing, decreasing, positive, or negative, and symmetry.

Positive intervals mean they are Above the x-axis.
Negative intervals mean they are Below the x-axis.

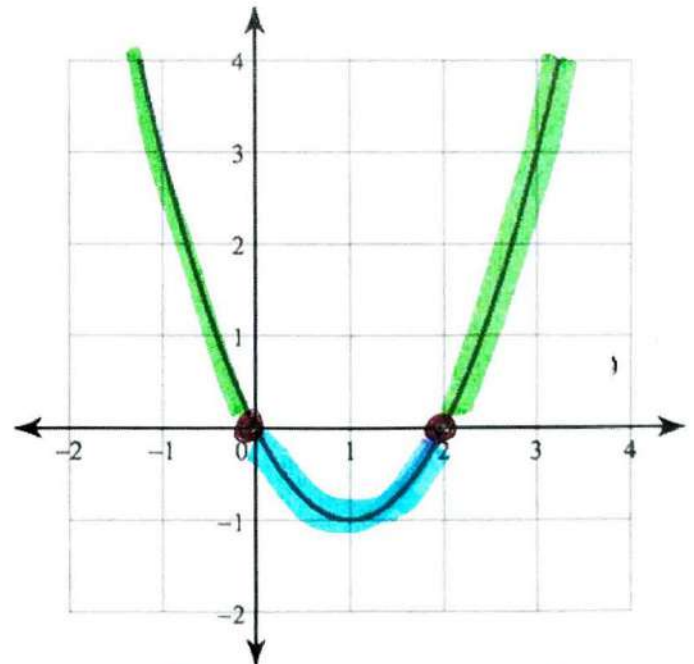


Directions: For each of the following graphs determine the intervals on which the graph is positive or negative.

1.

- Steps**

 1. Identify the x-intercepts
 2. Label the parts above the x-axis
Positive
 3. Label the parts below the x-axis
Negative
 4. Write interval notation



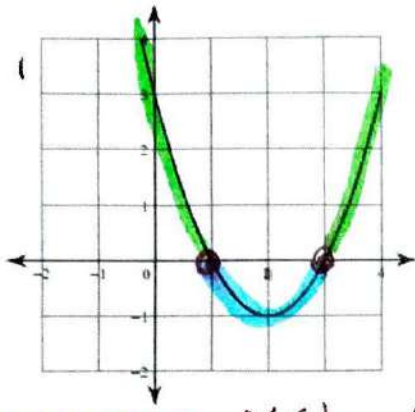
Positive Intervals:

$x < 0$ $x > 2$

Negative Intervals:

$0 < x < 2$ _____

2.



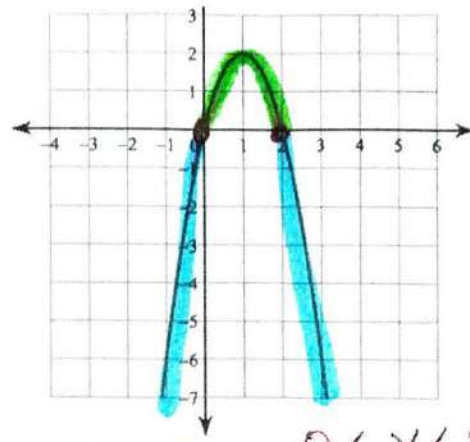
Positive Intervals:

$$x < 1 ; x > 3$$

Negative Intervals:

$$1 < x < 3$$

3.



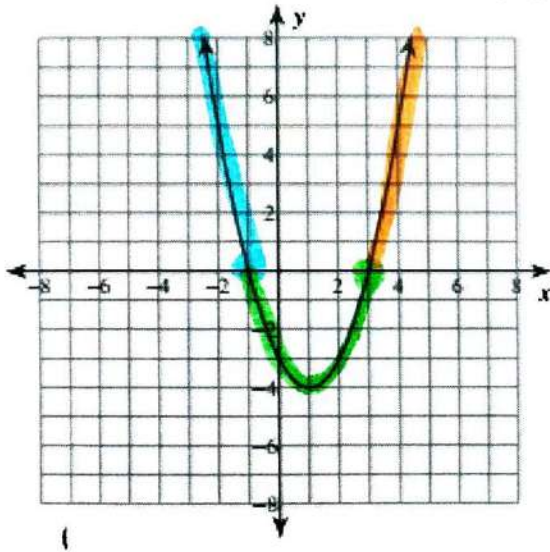
Positive Intervals:

$$0 < x < 2$$

Negative Intervals:

$$x < 0 ; x > 2$$

4. The function $f(x) = x^2 - 2x - 3$ is graphed as shown.



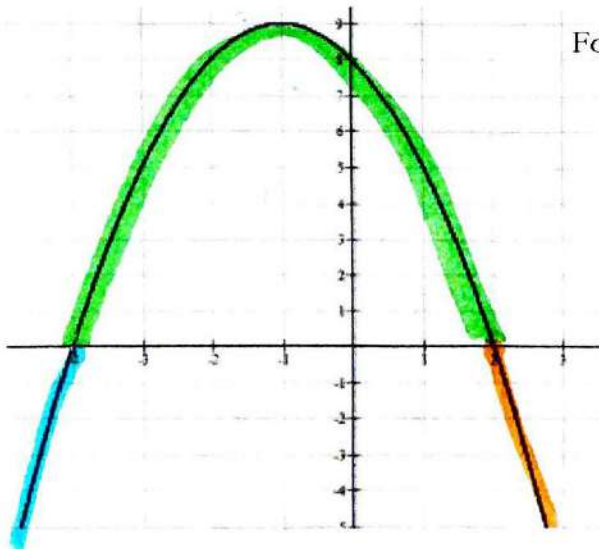
For each interval in the box, determine if $f(x)$ is positive or negative.

$(-\infty, -1)$
POS

$(-1, 3)$
Neg

$(3, \infty)$
POS.

9. The function $f(x) = -x^2 - 2x + 8$ is graphed as shown.



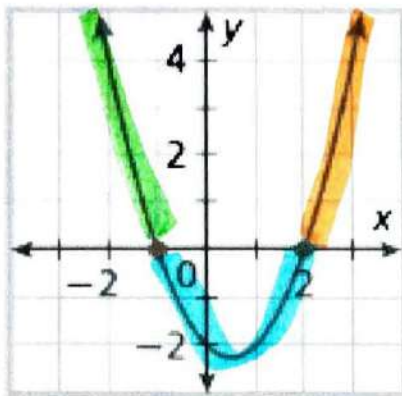
For each interval in the box, determine if $f(x)$ is positive or negative.

$(-\infty, -4)$
Neg

$(-4, 2)$
POS

$(2, \infty)$
Neg

10. The function $f(x) = x^2 - x - 2$ is graphed as shown.



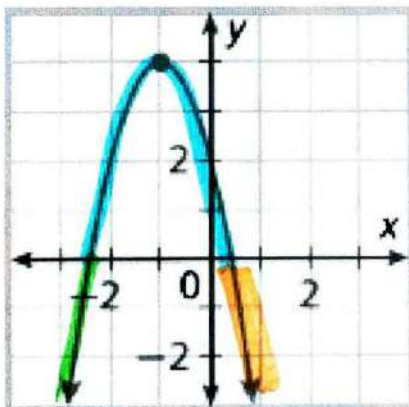
For each interval in the box, determine if $f(x)$ is positive or negative.

$(-\infty, -1)$
Pos

$(-1, 2)$
Neg

$(2, \infty)$
Pos

11. The function $f(x) = -x^2 + 2x - 1.25$ is graphed as shown.



For each interval in the box, determine if $f(x)$ is positive or negative.

$(-\infty, -2.5)$
Neg

$(-2.5, .5)$
Pos

$(.5, \infty)$
Neg