

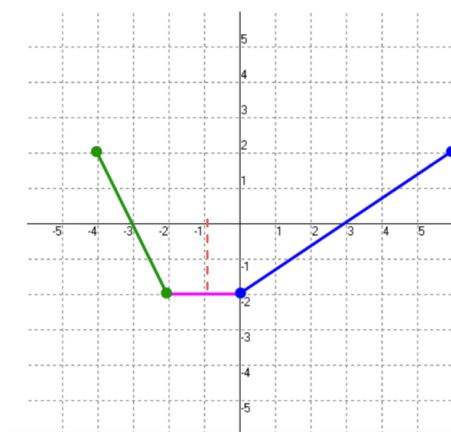
# Test :Analyzing Functions

- Review the homework on Analyzing Functions.
- More solved examples are available on Cinemath portal.
- Below are the answers to the Homework Questions.

## Analyzing Functions

Name: \_\_\_\_\_

### Questions # 1

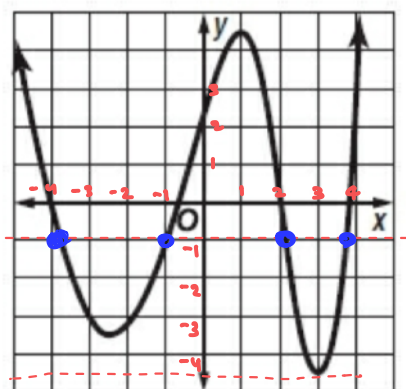


1. Domain  $[-4, 6]$
2. Range:  $[-2, 2]$
3. The interval in which the graph is increasing  $(0, 6)$
4. The interval in which the graph is decreasing  $(-4, -2)$
5. The interval in which the graph is positive  $(-4, -2) \cup (3, 6)$
6. The interval in which the graph is negative  $(-3, 3)$
7.  $f(-1) = -2$
8.  $f(-4) = 2$

9.  $f(-1) = -2$

10. Value(s) of  $x$  which  $f(x) = 2$   $-4$  and  $6$

### Questions # 2



11. Domain  $(-\infty, \infty)$
12. Range:  $[-4.5, \infty)$
13. The interval in which the graph is increasing  $(-2.5, 1) \cup (3, \infty)$
14. The interval in which the graph is decreasing  $(-\infty, -2.5) \cup (1, 3)$
15. The interval in which the graph is positive  $(-\infty, -4) \cup (-3/4, 2) \cup (4, \infty)$
16. The interval in which the graph is negative  $(-4, -3/4) \cup (2, 4)$
17.  $f(-1) = -1$
18.  $f(-4) = 0$

19. Value(s) of  $x$  which  $f(x) = -1$

$x = -3.9, x = -1, x = 2.1, x = 3.9$

20. Describe the End Behavior

as  $x \rightarrow +\infty, f(x) \rightarrow +\infty$   
as  $x \rightarrow -\infty, f(x) \rightarrow +\infty$