(−2, 3)

(−4, 1)

(1, 0)

O

(3, −1)

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)? **0**

3. What is the value of f(0)? **− 1**

4. What is the value of x when f(x) = 3
   x = -2

5. What is the value of x when f(x) = -1
   x = 3, 0

6. What are the coordinates of the point where f(x) has and absolute maximum value?
   (-2, 3)

7. What are the coordinates of the point where f(x) has an absolute minimum value?
   (3, -1)   (0, -1)

8. Is f(x) continuous? **Yes**

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

10. On what interval is f(x) increasing?
    (-4, -2) ∪ (0, 1)

11. On what interval is f(x) decreasing?
    (-2, 0) ∪ (1, 3)

12. For what values is f(x) > 0?
    [-4, -1)

13. Find the average rate of change between
    x = -2 and x = 1.   **(-2, 3)   (1, 0)**
    $$\frac{0-3}{1-(-2)} = \frac{-3}{3}$$
    = -1

14. For what values is f(x) ≤ 0?
    [-1, 3]

15. Give the x-intercept(s) of f(x).
    (-1, 0)   (1, 0)

16. Give the y-intercepts of f(x). **(0, -1)**

17. What is the domain of f(x)? **[-4, 3]**

18. What is the range of f(x)? **[-1, 3]**