1.2 Defining Limits

Calculus

Give an interpretation of each statement.

1. $\lim_{x \to 1} f(x) = 9$	2. $\lim_{x \to -2} f(x) = 3$	3. $\lim_{x \to 4} f(x) = -8$
As x approaches 1, $f(x)$ approaches 9.	As x approaches -2, $f(x)$ approaches 3.	As x approaches 4, $f(x)$ approaches -8.

Use the following graph to evaluate each problem.
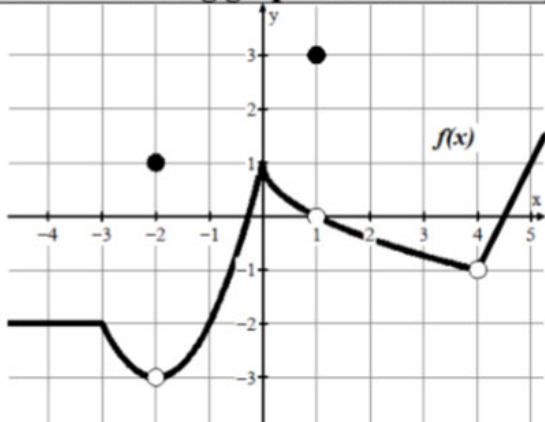
4. $f(-2) = 1$

5. $\lim_{x \to 1} f(x) = 0$

6. $\lim_{x \to -2} f(x) = -3$

7. $\lim_{x \to 0} f(x) = 1$

8. $f(4) = $ Und.
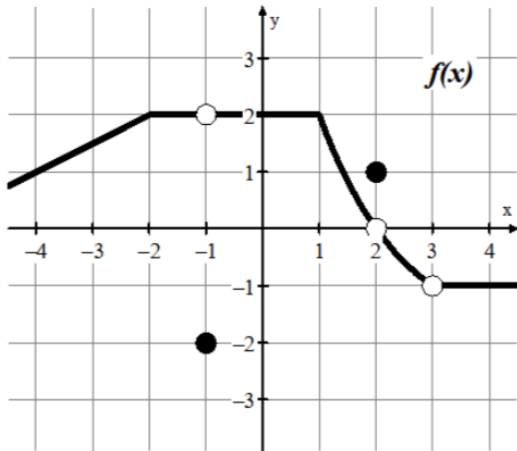
9. $\lim_{x \to 4} f(x) = -1$

10. $\lim_{x \to -4} f(x) = -2$

11. $f(1) = 3$

Use the following graph to evaluate each problem.

12. $\lim_{x \to -1} f(x) = 2$

13. $\lim_{x \to 3} f(x) = -1$

14. $f(2) = 1$

15. $\lim_{x \to -2} f(x) = 2$

16. $\lim_{x \to 1} f(x) = 2$
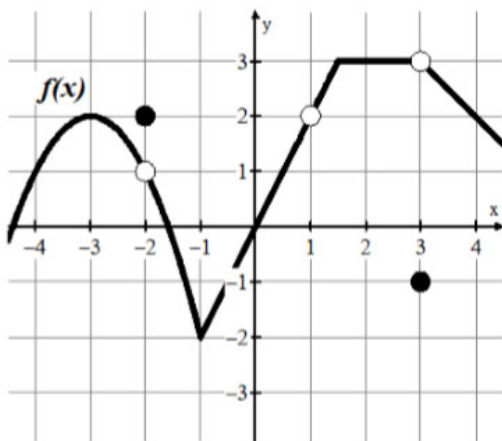
17. $f(3) = $ Und.

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

19. $\lim_{x \to 2} f(x) = 0$

Use the following graph to evaluate each problem.

20. $\lim_{x \to 2} f(x) = 3$

21. $f(1) = $ Und.

22. $\lim_{x \to 3} f(x) = 3$

23. $\lim_{x \to -2} f(x) = 1$
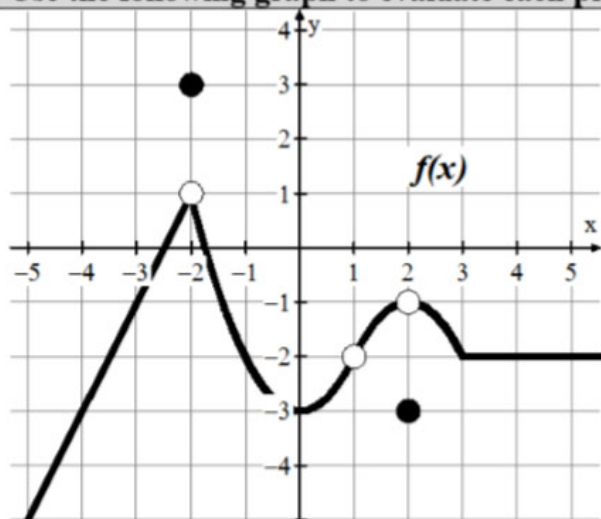
24. $\lim_{x \to 1} f(x) = 2$

25. $f(-2) = 2$

26. $\lim_{x \to -3} f(x) = 2$

27. $f(3) = -1$

Use the following graph to evaluate each problem.

28. $\lim\limits_{x \to -2} f(x) = 1$

29. $\lim\limits_{x \to 1} f(x) = -2$

30. $\lim\limits_{x \to 2} f(x) = -1$

31. $f(-2) = 3$

32. $f(1) = $ Und.

33. $\lim\limits_{x \to 0} f(x) = -3$

34. $\lim\limits_{x \to -4} f(x) = -3$

35. $f(2) = -3$

1.2 Defining Limits

Test Prep

36. Let f be a function that is defined for all real numbers x. Of the following, which is the best interpretation of the statement $\lim\limits_{x \to 4} f(x) = 8$.

    (A) The value of the function f at $x = 4$ is 8.

    (B) The value of the function f at $x = 8$ is 4.

    (C) As x approaches 4, the values of $f(x)$ approach 8.

    (D) As x approaches 8, the values of $f(x)$ approach 4.

37. Let f be a function that is defined for all real numbers x. Of the following, which is the best interpretation of the statement $\lim\limits_{x \to -1} f(x) = 2$.

    (A) As x approaches 2, the values of $f(x)$ approach -1

    (B) The value of the function f at $x = -1$ is 2.

    (C) The value of the function f at $x = 2$ is -1.

    (D) As x approaches -1, the values of $f(x)$ approach 2.