

Functions

For each function evaluate the following.

1. $f(x) = 2x - 5$
Determine $f(-1), f(0), f(2), f(t), f(t + 1)$
2. $f(x) = 3x + 2$
Determine $f(-1), f(0), f(2), f(t), f(t + 1)$
3. $f(x) = x^2 - x + 3$
Determine $f(-2), f(0), f(3), f(t), f(t - 1)$
4. $f(x) = 2x^2 - x + 1$
Determine $f(-2), f(0), f(3), f(t), f(t - 1)$
5. $f(x) = \sqrt{x - 4}$
Determine $f(-1), f(0), f(4), f(8), f(9), f(t), f(2t)$
6. $f(x) = \sqrt{x - 1}$
Determine $f(-1), f(0), f(1), f(2), f(5), f(t), f(2t)$
7. $f(x) = \frac{1}{x}$
Determine $f(-2), f(0), f(1), f(2), f(t), f(t + 3), f(2t - 3)$
8. $f(x) = \frac{3}{x}$
Determine $f(-2), f(0), f(1), f(2), f(t), f(t + 3), f(2t - 3)$
9. $f(x) = \frac{1}{x^2}$
Determine $f(-2), f(0), f(1), f(2), f(t), f(t + 3), f(2t - 3)$
10. $f(x) = \frac{2}{x^2}$
Determine $f(-2), f(0), f(1), f(2), f(t), f(t + 3), f(2t - 3)$
11. $f(x) = |x|$
Determine $f(-4), f(-1), f(0), f(2), f(5), f(t), f(t + 1)$
12. $f(x) = |2x|$
Determine $f(-4), f(-1), f(0), f(2), f(5), f(t), f(t + 1)$
13. $f(x) = |x - 3|$
Determine $f(-4), f(-1), f(0), f(2), f(5), f(t), f(t + 1)$

14. $f(x) = |x + 2|$
Determine $f(-4), f(-1), f(0), f(2), f(5), f(t), f(t + 1)$

15. $f(x) = x^3$
Determine $f(-2), f(-1), f(0), f(1), f(2), f(t)$

16. $f(x) = x^3$
Determine $f(-3), f(-1), f(0), f(3), f(4), f(t)$

17. $f(x) = \sqrt[3]{x}$
Determine $f(-8), f(-1), f(0), f(1), f(8), f(t)$

18. $f(x) = \sqrt[3]{x}$
Determine $f(-64), f(-27), f(0), f(27), f(64), f(t)$

Determine The domain for the following functions.

19. $f(x) = 4x - 5$

20. $f(x) = 3x + 2$

21. $f(x) = x^2 - x + 4$

22. $f(x) = 2x^2 + x - 3$

23. $f(x) = \frac{1}{x}$

24. $f(x) = \frac{1}{x-2}$

25. $f(x) = \frac{1}{x+5}$

26. $f(x) = \frac{2}{3x}$

27. $f(x) = \frac{x}{3x-6}$

28. $f(x) = \frac{3x}{2x+4}$

29. $f(x) = \sqrt{x-4}$

30. $f(x) = \sqrt{x+3}$

31. $f(x) = \sqrt{2x+8}$

32. $f(x) = \sqrt{3x-12}$

33. $f(x) = \frac{x}{x^2-4}$

34. $f(x) = \frac{x}{x^2-9}$

35. $f(x) = \sqrt{x^2-4}$

36. $f(x) = \sqrt{x^2-9}$

37. $f(x) = \frac{5}{4x+5}$

38. $f(x) = \frac{3}{3x-8}$

39. $f(x) = \sqrt{3x+8}$

40. $(x) = \sqrt{4x+9}$

Determine the compositions with f and g.

That is, $(f \circ g)(x)$ and $(g \circ f)(x)$

41. $f(x) = x^2 + 1$ and $g(x) = x - 3$

42. $f(x) = x^2 - 1$ and $g(x) = x + 3$

43. $f(x) = x + 5$ and $g(x) = \frac{1}{x^2}$

44. $f(x) = x - 5$ and $g(x) = \frac{1}{x^2}$

45. $f(x) = x^2 + 4$ and $g(x) = \sqrt{x - 2}$

46. $f(x) = x^2 - 4$ and $g(x) = \sqrt{x + 2}$

47. $f(x) = 2x + 5$ and $g(x) = \sqrt{x} - 4$

48. $f(x) = 2x - 5$ and $g(x) = \sqrt{x} + 4$