

5.3 Practice A

In Exercises 1–6, graph the function. Identify the domain and range of the function.

1. $g(x) = \sqrt{x} + 4$

2. $h(x) = \sqrt{x} - 2$

3. $f(x) = -\sqrt[3]{4x}$

4. $h(x) = \sqrt[3]{-2x}$

5. $f(x) = \frac{1}{3}\sqrt{x-2}$

6. $g(x) = \frac{1}{4}\sqrt{x+5}$

7. $g(x) = -\sqrt{x} + 2$

8. $f(x) = \sqrt[3]{-4x}$

9. $f(x) = \frac{1}{4}\sqrt{x+5}$

10. $h(x) = (5x)^{1/2} - 2$

11. $g(x) = -2(x-3)^{1/3}$

12. $h(x) = -\sqrt[5]{x}$

In Exercises 13 – 24, describe the transformation of f represented by g .

13. $f(x) = \sqrt{x}$; $g(x) = \sqrt{x-1} + 4$

14. $f(x) = \sqrt{x}$; $g(x) = 3\sqrt{x+2}$

15. $f(x) = \sqrt[3]{x}$; $g(x) = -2\sqrt[3]{x}$

16. $f(x) = \sqrt[3]{x}$; $g(x) = \sqrt[3]{x-1} + 3$

17. $f(x) = x^{1/2}$; $g(x) = 3(-x)^{1/2}$

18. $f(x) = x^{1/3}$; $g(x) = -\frac{1}{3}x^{1/3}$

19. $f(x) = \sqrt{x}$; $g(x) = 4\sqrt{x-2}$

20. $f(x) = \sqrt[3]{x}$; $g(x) = \sqrt[3]{x-5} - 1$

21. $f(x) = x^{1/4}$; $g(x) = \frac{1}{3}(-x)^{1/4}$

22. $f(x) = x^{1/3}$; $g(x) = \frac{1}{2}x^{1/3} - 3$

23. $f(x) = \sqrt[4]{x}$; $g(x) = -\sqrt[4]{x-1} + 3$

24. $f(x) = \sqrt[5]{x}$; $g(x) = \sqrt[5]{-243x} - 2$