

Practice 10-5**Graphing Square Root Functions****Find the domain and range of each function.**

1. $f(x) = \sqrt{x - 7}$

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

3. $y = \sqrt{4x + 11}$

4. $y = \sqrt{x - 12}$

5. $f(x) = \sqrt{x + 14}$

6. $y = \sqrt{x + 8}$

7. $y = \sqrt{5x + 13}$

8. $y = \sqrt{2x + 3}$

9. $y = \sqrt{6x - 2}$

Make a table of values and graph each function.

10. $y = \sqrt{x} - 12$

11. $y = 3\sqrt{x}$

12. $y = \sqrt{x + 8}$

13. $y = \sqrt{x + 7} - 6$

14. $y = \sqrt{x - 6} - 8$

15. $y = \sqrt{x - 10}$

16. $y = 2\sqrt{x - 2}$

17. $y = \sqrt{x - 8} + 6$

18. $y = \sqrt{x + 7}$

Describe how the graph of each function relates to the graph of $y = \sqrt{x}$.

19. $y = \sqrt{x} - 9$

20. $y = \sqrt{x - 19}$

21. $y = \sqrt{x + 18}$

22. $y = \sqrt{x + 11}$

23. The number of people involved in recycling in a community is modeled by the function $n = 90\sqrt{3t} + 400$, where t is the number of months the recycling plant has been open.

- Graph the function.
- Find the number of people recycling when the plant has been open for 6 mo.
- Find the month when about 670 people were recycling.

24. The time t , in seconds, that it takes for an object to drop a distance d , in feet, is modeled by the function $t = \sqrt{\frac{d}{16}}$. Assume no air resistance.

- Graph the function.
- Find the time it takes for an object to fall 1000 ft.
- How far does an object fall in 10 s?