

# 10-5 Practice B

## Graphing Square Root Functions

Form K

Find the domain of each function.

1.  $y = -2x\sqrt{3x}$

2.  $y = \frac{2}{5}\sqrt{x}$

3.  $y = -3\sqrt{5x+10}$

4.  $y = \sqrt{x-7}$

5.  $y = 3.5\sqrt{x+3}$

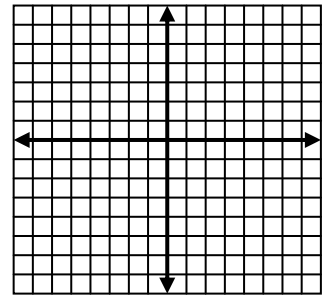
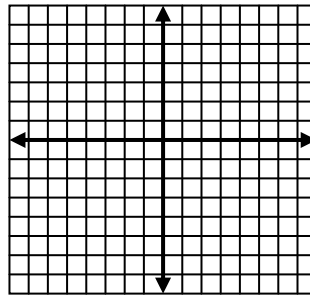
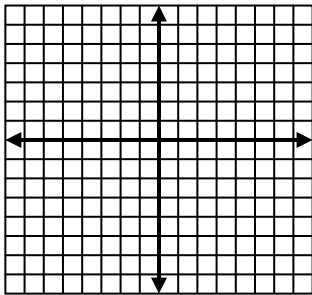
6.  $y = \sqrt{4x-16}$

Make a table of values and graph each function.

7.  $y = \sqrt{x+4}$

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

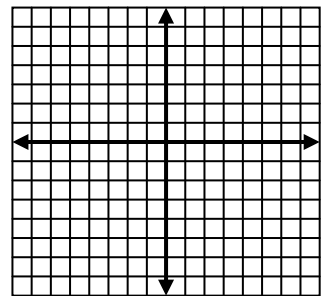
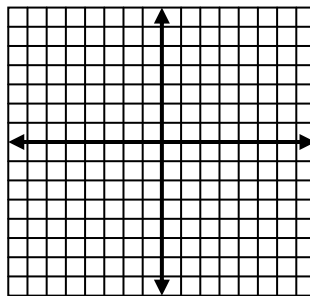
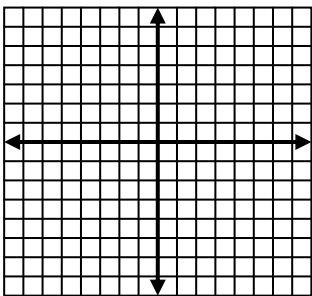
9.  $y = \sqrt{x-5}$



10.  $y = 3\sqrt{2x+1}$

11.  $y = 2\sqrt{\frac{x}{2}-4}$

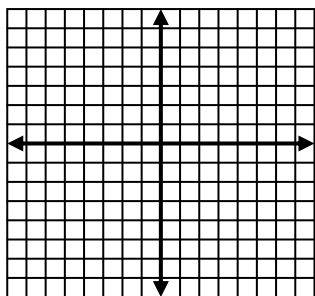
12.  $y = \sqrt{8x+5}$



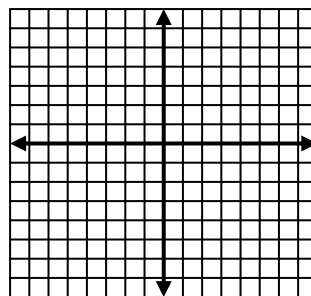
13. A pendulum completes one full swing every  $t$  seconds. The variable  $t$  is determined by the function  $t = 2\sqrt{\frac{l}{3.3}}$  where  $l$  is the length in meters of the pendulum. What are the domain and range of the function? Graph the function. What is the length of a pendulum in meters that takes 5 seconds to complete one full swing?

Graph each function by translating the graph of  $y = \sqrt{x}$ .

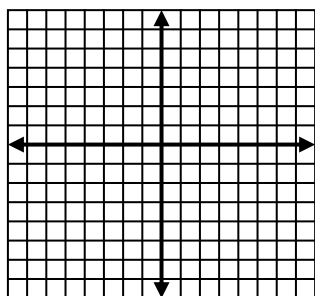
14.  $y = \sqrt{x+3}$



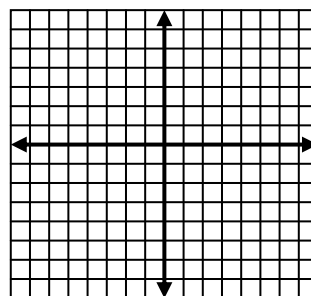
15.  $y = \sqrt{x-3}$



16.  $y = \sqrt{x+3}$



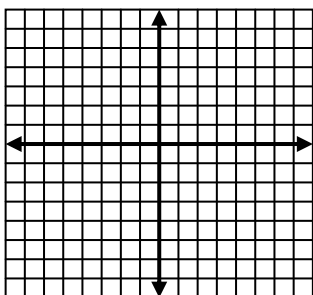
17.  $y = \sqrt{x-3}$



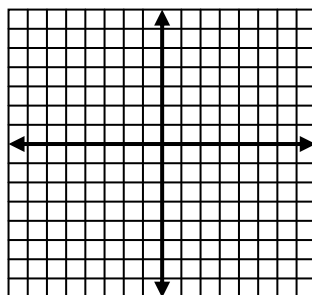
18. The braking distance  $d$  in feet when stopping a car in an emergency is modeled by the function  $s = \sqrt{21d}$ , where  $s$  is the speed of the car in miles per hour. Graph the function. How many feet does it take to stop if the car is traveling 25 mph? 50 mph? Round to the nearest foot.

Make a table of values and graph each function.

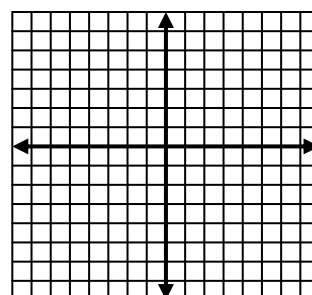
19.  $y = 5\sqrt{x-6} + 10$



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



21.  $y = 5\sqrt{x-2}$



22. **Reasoning** Is the following statement true or false? The domain of a square root function only includes positive numbers. If the statement is false, provide a counterexample.

23. **Writing** Explain how the graph of  $y = \sqrt{x+4}$  is related to the graph of  $y = \sqrt{x}$ .