Exploration: Identifying Graphs of Transformations

Work with a partner. Match each transformation of \( f(x) = \sqrt{x} \) with its graph. Explain your reasoning. Then identify the domain and range of each function.

- a. \( g(x) = \sqrt{x} + 2 \)
- b. \( g(x) = \sqrt{x} - 2 \)
- c. \( g(x) = \sqrt{x + 2} - 2 \)
- d. \( g(x) = -\sqrt{x} + 2 \)

Communicate Your Answer

3. How can you identify the domain and range of a radical function?

4. Use the results of Exploration 1 to describe how the domain and range of a radical function are related to the index of the radical.