Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_

Graph each function and identify its domain and range.

1.  2. 

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Transformations: \_\_\_\_\_\_\_\_\_\_\_\_ Transformations: \_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.  4. 

Describe the transformation from the parent function, .

1.  6. 

Describe the transformation from the parent function, .

1.  8. 

Use the description to write the square-root function *g*.

1. The parent function is reflected across the *x*-axis, stretched vertically by a factor of 6, and then translated 2 units right.

Tell whether each statement is sometimes, always or never true.

1. The domain of a radical function is all real numbers.
2. The range of  where *a* and *h* are nonzero real numbers, is all real numbers.
3. The range of  where a and k are nonzero real numbers, is all real numbers.
4. Which function has a range of 
5. 
6. 
7. 
8. 
9. The function is transformed solely by using translations and reflections to produce *g*. The domain of *g* is all real numbers greater than or equal to 3, and the range is all real numbers less than or equal to 2. What is the equation that represents *g*?

1. Given and  Describe the changes that occur when is transformed into 
2. Change in range only
3. Change in domain only
4. Change in both domain and range
5. Reflection over *x*-axis
6. III, IV
7. III
8. I, IV
9. II, IV