$\qquad$

## Identify the domain and range of the function.

1. 


D: $\qquad$

R: $\qquad$
2.


D: $\qquad$

R: $\qquad$
3. Name a value that is in the domain, but is not in its range.
4. Name a value that is in the range, but is not in its domain.

5. Which transformation of $y=f(x)$ moves the graph 5 units to the right and 2 units up?
6. Which transformation of $y=f(x)$ would expand vertically by a factor of 3 , reflect across the $x$-axis, and translate 4 units left and 6 units down?

Find the inverse for the following:
7. $y=3 x+1$
8. $y=\sqrt{-3 x+1}$
9. $y=(x-4)^{4}$

Write a piecewise function from the following graphs.
10.

11.

12. Find $f(-6)$ for the given piecewise function:

$$
f(x)=\left\{\begin{array}{cc}
x^{2}+1 ; & x \leq-1 \\
x+4 ; & -1<x<2 \\
5 ; & x \geq 2
\end{array}\right.
$$

13. Find the function values for the given piecewise function:
$f(-8)$
$f(1.75)$ $\qquad$

$$
f(x)=\left\{\left.\begin{array}{lr}
x^{2}, & x<0 \\
2, & 0 \leq x \leq 3 \\
4-x, & x>3
\end{array} \right\rvert\,\right.
$$

$f(17)$ $\qquad$

