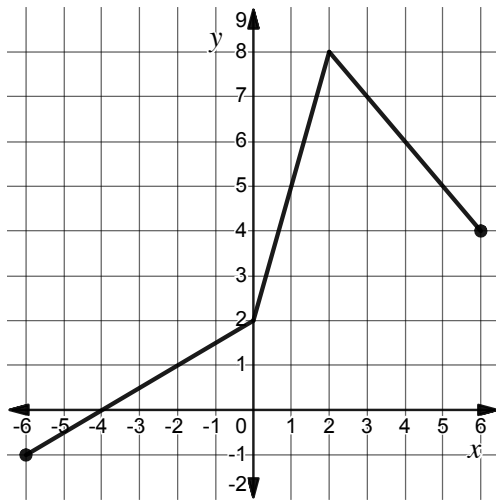


HW 5-3

NAME _____

1. The function B gives the temperature of Boston, Massachusetts, $B(t)$, on a particular day, where t is measured in hours after midnight. Is B a one-to-one function? How do you know?

2. The graph of $y = f(x)$ is shown below on the xy -plane for $-6 \leq x \leq 6$. Is f a one-to-one function on its domain? Explain.



3. Find the inverse of $y = \sqrt{x + 3}$ and state its domain and range.

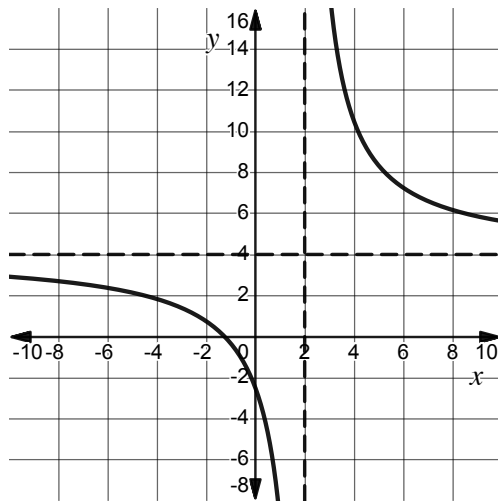
4. Let $f(x) = \frac{1}{x+5}$. Find the domain and range of f^{-1} . Is it possible to do this without finding the expression for f^{-1} ? Explain.

5. A table of selected values is given for a one-to-one function g . At $x = -5$, g has a vertical asymptote.

x	$g(x)$
-5	undefined
-2	-14
0	-11
3	-1
6	0

- a. What is the y -intercept of g^{-1} ?
- b. Write the equation for the horizontal asymptote of g^{-1} .

6. The graph of $f(x) = \frac{4x + 5}{x - 2}$ is shown. Give the domain and range of f^{-1} .



7. Explain how you could restrict the domain of $f(x) = -2(x - 4)^2 + 5$ so that it is a one-to-one function.

8. The graph of a function h is shown. Graph the inverse of h on the blank coordinate grid.

