

Properties of Inverse Functions

Name: _____

Fill in the table of values for each function and its inverse.

1) $f(x) = 3x + 1$

Function	
x	f(x)
-2	
-1	
0	
1	
2	
3	

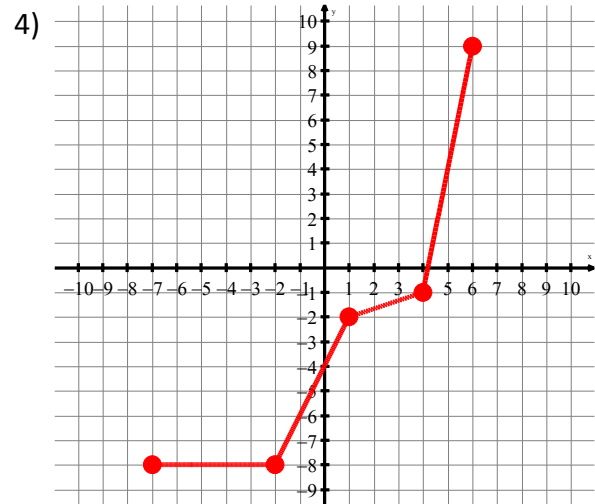
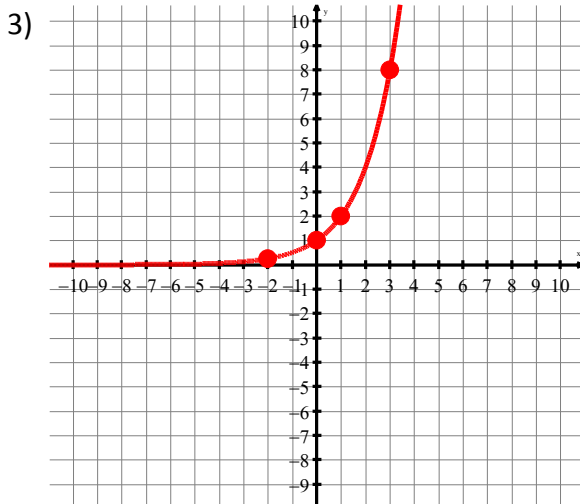
Inverse	
x	f ⁻¹ (x)

2) $g(x) = (2 - x)^2$

Function	
x	g(x)
-3	
-2	
-1	
0	
1	
2	

Inverse	
x	g ⁻¹ (x)

Graph the inverse of the function shown below. Also graph $y = x$ as a dashed line to show the symmetry.



Determine the domain and range of the following functions and their inverses. Restrict the domain as needed.

5) $f(x) = 2^x$

f(x) Domain: _____ Range: _____

f⁻¹(x) Domain: _____ Range: _____

6) $g(x) = x^2 + 3$

g(x) Domain: _____ Range: _____

g⁻¹(x) Domain: _____ Range: _____

7) $h(x) = \frac{1}{2}x + 1$

h(x) Domain: _____ Range: _____

h⁻¹(x) Domain: _____ Range: _____

8) $j(x) = 2\sqrt{x - 1}$

j(x) Domain: _____ Range: _____

j⁻¹(x) Domain: _____ Range: _____