

One-to-One

If  $x_1$  and  $x_2$  are in the domain of the function and  $x_1 \neq x_2$ , then  $f(x_1) \neq f(x_2)$

What is the test that indicates a function is one-to-one?  
 If a function is one-to-one, what does it have? How is it denoted?

How does the original function's domain and range relate to the inverse?

F(x)  
 Domain  
 Range

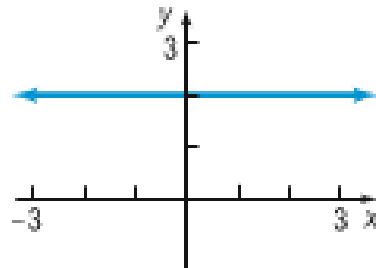
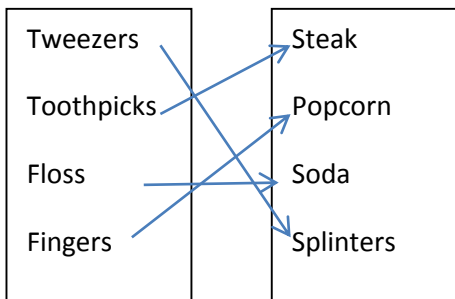
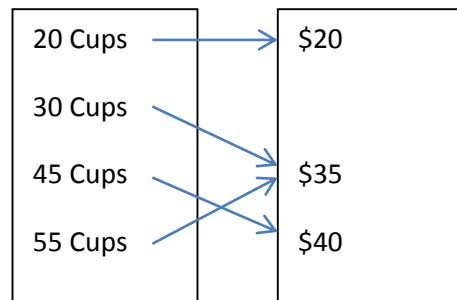
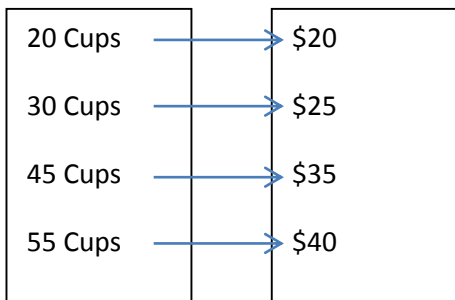
Inverse  
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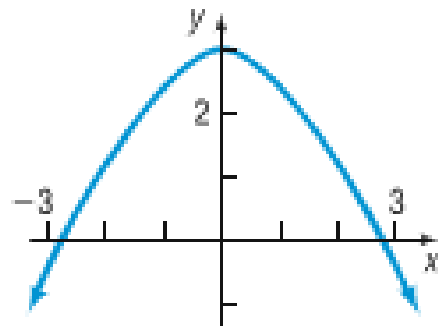
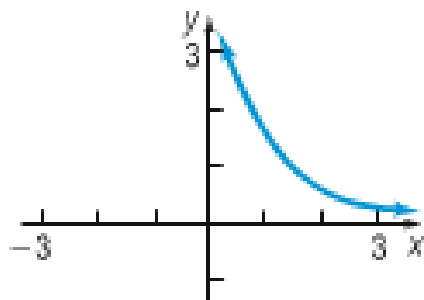
If  $x$  is in the domain of  $f$ :  
 $f^{-1}(f(x)) = x$

If  $x$  is in the domain of  $f^{-1}$ :  
 $f(f^{-1}(x)) = x$

$f(x)$  and  $f^{-1}(x)$  are symmetric with respects to the line  $y = x$

Determine if these examples or graphs are one-to-one





Ensure that functions  $f$  and  $g$  are inverses of each other

- Type equation here.