



## Exploring the Problem

1. After graphing the original wind tunnel data and then graphing the data with the domain and range switched, what did you notice about the graphs of the two sets of points?
2. What is the equation of the line that resulted from connecting the midpoint of the first points of **s1** and **s2** and the midpoint of the last points of **s1** and **s2**? What does this line represent?
3. What is the equation of the line that resulted from connecting the points obtained by switching the  $x$ - and  $y$ -coordinates of the  $x$ - and  $y$ -intercepts of  $y = 2x + 3$ ?
4. Switch  $x$  and  $y$  in the equation  $y = 2x + 3$  and solve for  $y$ . How does your result compare to your answer to Question 3?
5. List 3 ways in which the inverse of a function may be obtained.
6. The inverse of a function is always a function.       Agree       Disagree  
Explain your answer choice and provide at least one example to illustrate why you chose your response.
7. Find the inverse of the following functions if an inverse exists. If an inverse does not exist, write "does not exist."

Function	Inverse
$f(x) = 6x - 2$	$f^{-1}(x) =$
$f(x) = \frac{1}{2}x - \frac{3}{4}$	$f^{-1}(x) =$
$ f(x) =  x $	$f^{-1}(x) =$