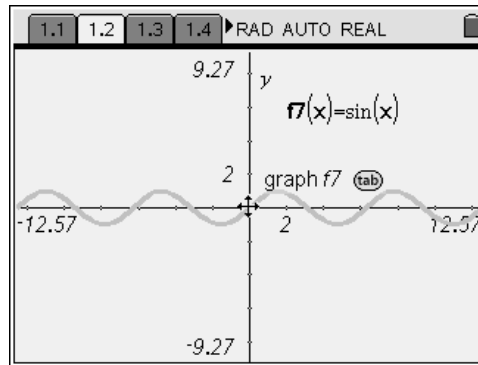


1.1 1.2 1.3 1.4 RAD AUTO REAL

Recall that in order for a function to have an inverse, it must be 1:1 which means it passes both the vertical and horizontal line test.

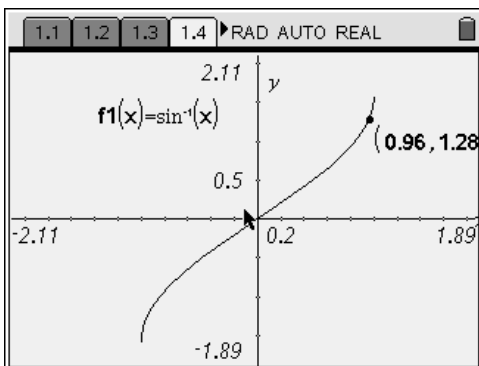
On the next page you have the graph of sine, does it pass both of these tests? After you look at the graph and answer this question proceed to the third page.



1.1 1.2 1.3 1.4 RAD AUTO REAL

The answer is no. Does this mean that sine does not have an inverse? Yes and No. On the next page you will see the graph of the inverse of sine.

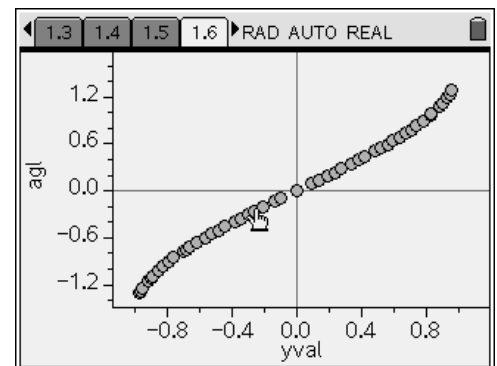
Look at the graph and then proceed to the next page.



1.2 1.3 1.4 1.5 RAD AUTO REAL

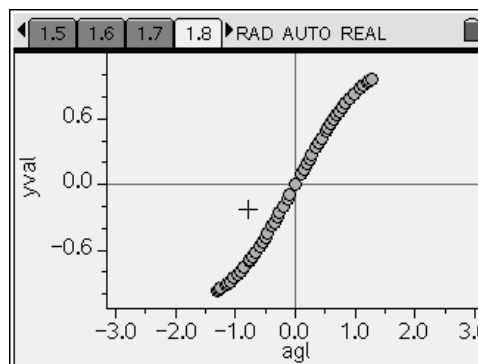
To see how the graph of the inverse sine is related to the sine function we can plot points and then switch the x's and y's which is all an inverse does.

Go Back to the previous page and drag the point so that the calculator will collect all of the points. Then proceed to the page after this one to see the graph.



1.4 1.5 1.6 1.7 RAD AUTO REAL

On the next page you will see the x and y values switched. What shape do the points resemble?



1.6 1.7 1.8 1.9 RAD AUTO REAL

The graph resembles the sine wave. On the next page is the sine wave on top of the data. Use this graph and your knowledge of the unit circle to define the domain and range of the sine inverse function by finding the x and y intervals where the data and the graph overlap.

