

'Nice' scales in Plot and Plot-Table

The reason for the seemingly strange default scale of -6.5 to 6.5 is to ensure that each dot on the screen is exactly 0.1 apart, since the screen has 131 by 65 pixels (dots).

There are other scales, basically multiples of these numbers, that also give nice values if you want to **TRAC** along the graph. For example, halving each of -6.5 and 6.5 will place the dots 0.05 apart.

To zoom out instead of in simply double the values, producing dots that are 0.2 apart.

Similarly, if you want to center the graph around a particular value then just add that value to the range values. The example right is centered around $x = 1$ by adding 1 to -3.25 and 3.25.

A time when 'nice' scales are more important is when you use the *Plot-Table* option in the VIEWS menu. If you use the default axes you will find that the dots, and hence the table values are no longer 'nice' because of the dots consumed by the line down the middle of the screen.

This can be solved by changing the x axis scale to -6.4 to 6.4, which gives table values of 0.2.

Using -3.2 to 3.2 is even better since it makes the graph 'square' again, with both axes proportional. Another good choice of scale for the *Plot-Table* view is -8 to 8, giving table values of 0.25. Basically any power of 2 is a good choice. Again, adding or subtracting a constant from each end of the axes will produce a graph where the y axis is not centred.

