Chapter 25
Editing Windows

Chapter Table of Contents

ZOOMING WINDOWS 368
RENEWING WINDOWS 375
ADDING AND DELETING 378
MOVING AND SIZING 385
ALIGNING GRAPHS 391

Chapter 25
Editing Windows

SAS/INSIGHT software provides many ways to edit the contents of your analysis windows. You can zoom in and out to see more or less detail. You can move, resize, add, and delete graphs and tables. You can align graphs. If you change your mind about your window layout, you can renew any window to restore its original state.

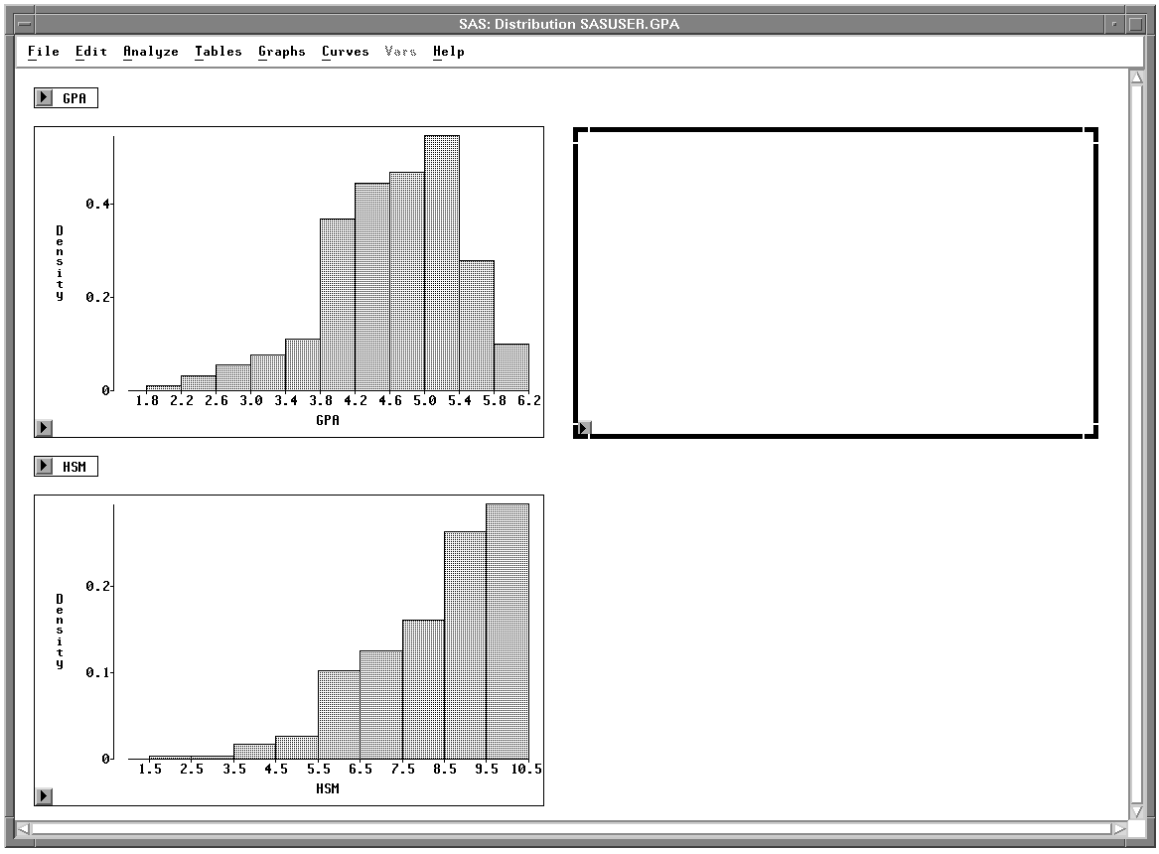


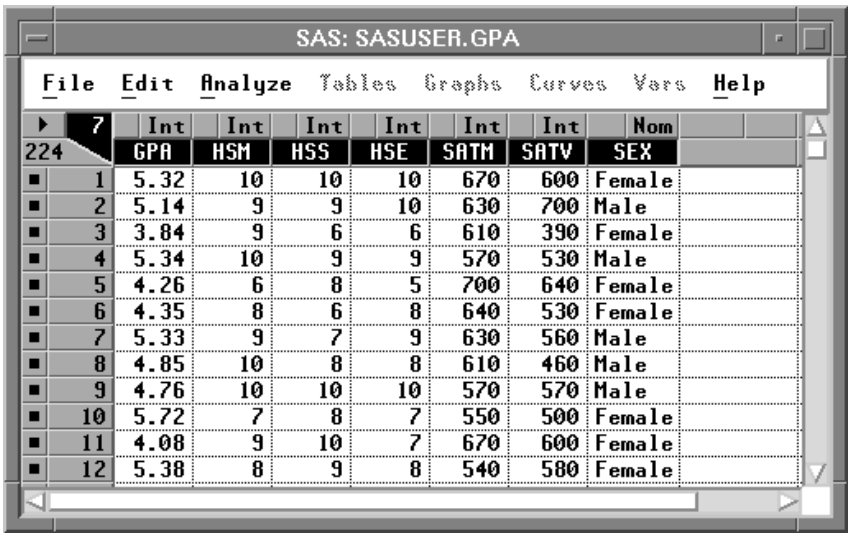
Figure 25.1. Adding a Graph to a Window

Zooming Windows

Zooming a window means adjusting the focus to make objects in the window larger or smaller. Zooming is most useful when you want to see more detail. For example, you may use zooming to explore data in a scatter plot matrix.

⟹ **Open the GPA data set.**
This data set contains college grade point averages, high school math, science, and English averages, and SAT scores of first-year college students.

⟹ **Select all the variables.**
Click on the variables count in the upper left corner.



224	GPA	HSM	HSS	HSE	SATM	SATV	SEX
	Int	Int	Int	Int	Int	Int	Nom
1	5.32	10	10	10	670	600	Female
2	5.14	9	9	10	630	700	Male
3	3.84	9	6	6	610	390	Female
4	5.34	10	9	9	570	530	Male
5	4.26	6	8	5	700	640	Female
6	4.35	8	6	8	640	530	Female
7	5.33	9	7	9	630	560	Male
8	4.85	10	8	8	610	460	Male
9	4.76	10	10	10	570	570	Male
10	5.72	7	8	7	550	500	Female
11	4.08	9	10	7	670	600	Female
12	5.38	8	9	8	540	580	Female

Figure 25.2. Selecting All Variables

⟹ **Choose Analyze:Scatter Plot (Y X).**
This creates a seven-by-seven scatter plot matrix.

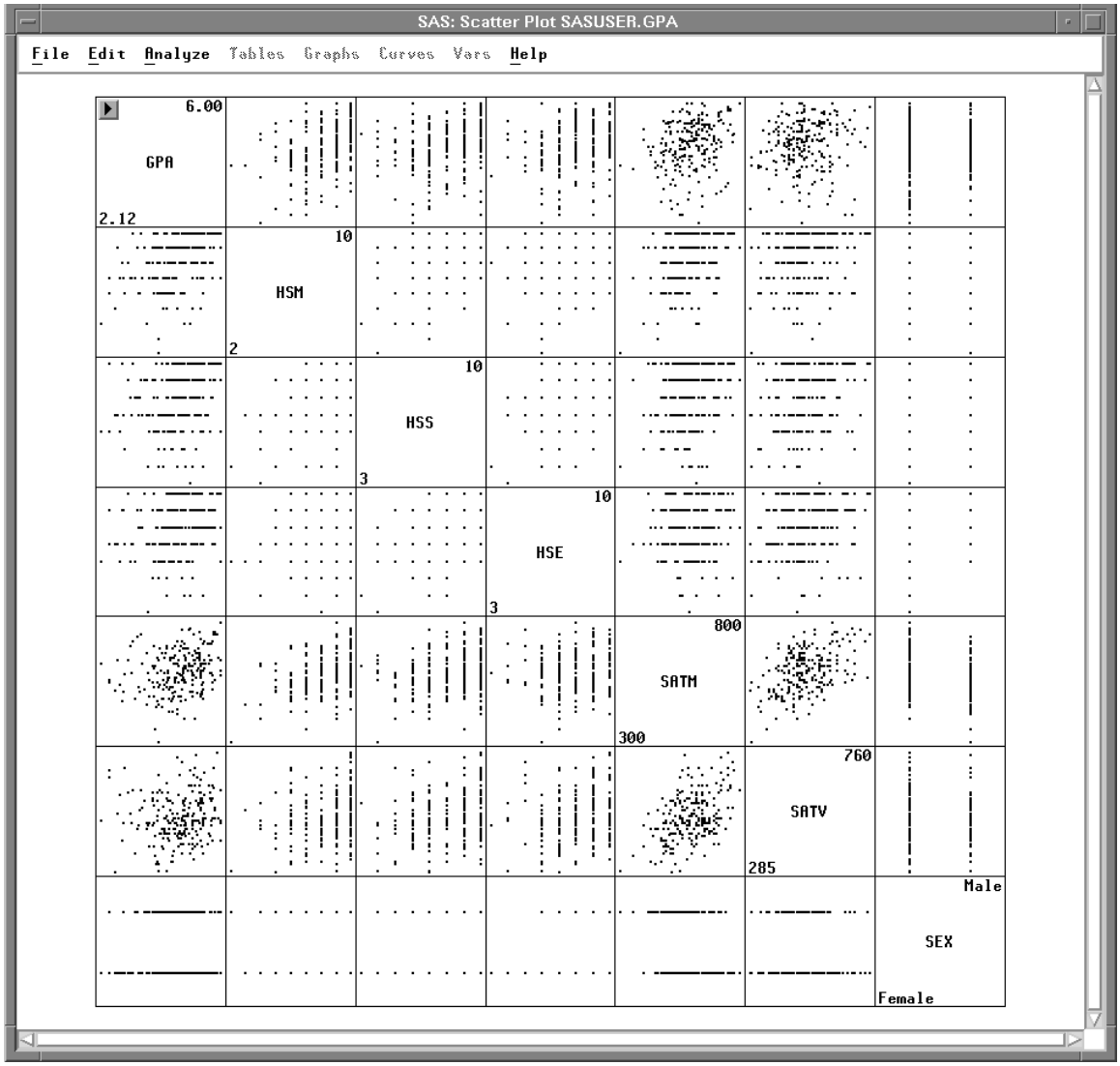


Figure 25.3. Scatter Plot Matrix

Some of these plots show interesting patterns. However, it is difficult to see the plots when they are so small. To change the size of the plots, follow these steps.

⟹ **Choose Edit:Windows:Tools.**

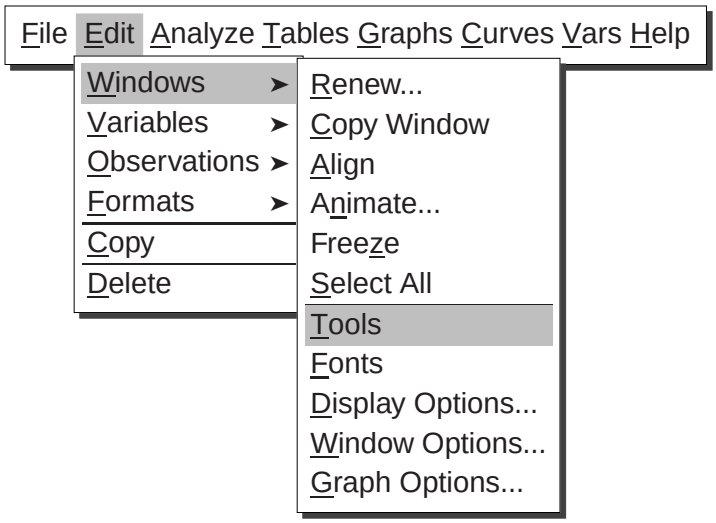


Figure 25.4. Edit:Windows Menu

This displays the Tools window. At the top, the window contains three tools, each indicating a different mode of operation. To select and identify objects, use the arrow. To manipulate objects, use the hand. To zoom, use the magnifying glass.

⟹ **Click on the magnifying glass in the Tools window.**
Now the magnifying glass in the window is highlighted, and the cursor changes from an arrow to a magnifying glass.

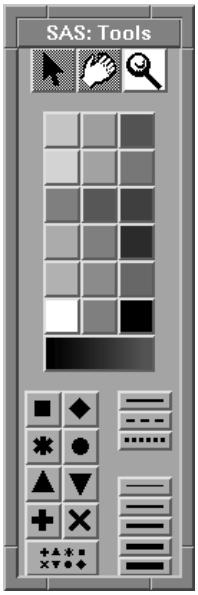


Figure 25.5. Tools Window

⟹ **Move the magnifying glass to the center of the window and click several times.**
When it is near the center of the window, the magnifying glass is large.

Clicking near the center makes objects larger.

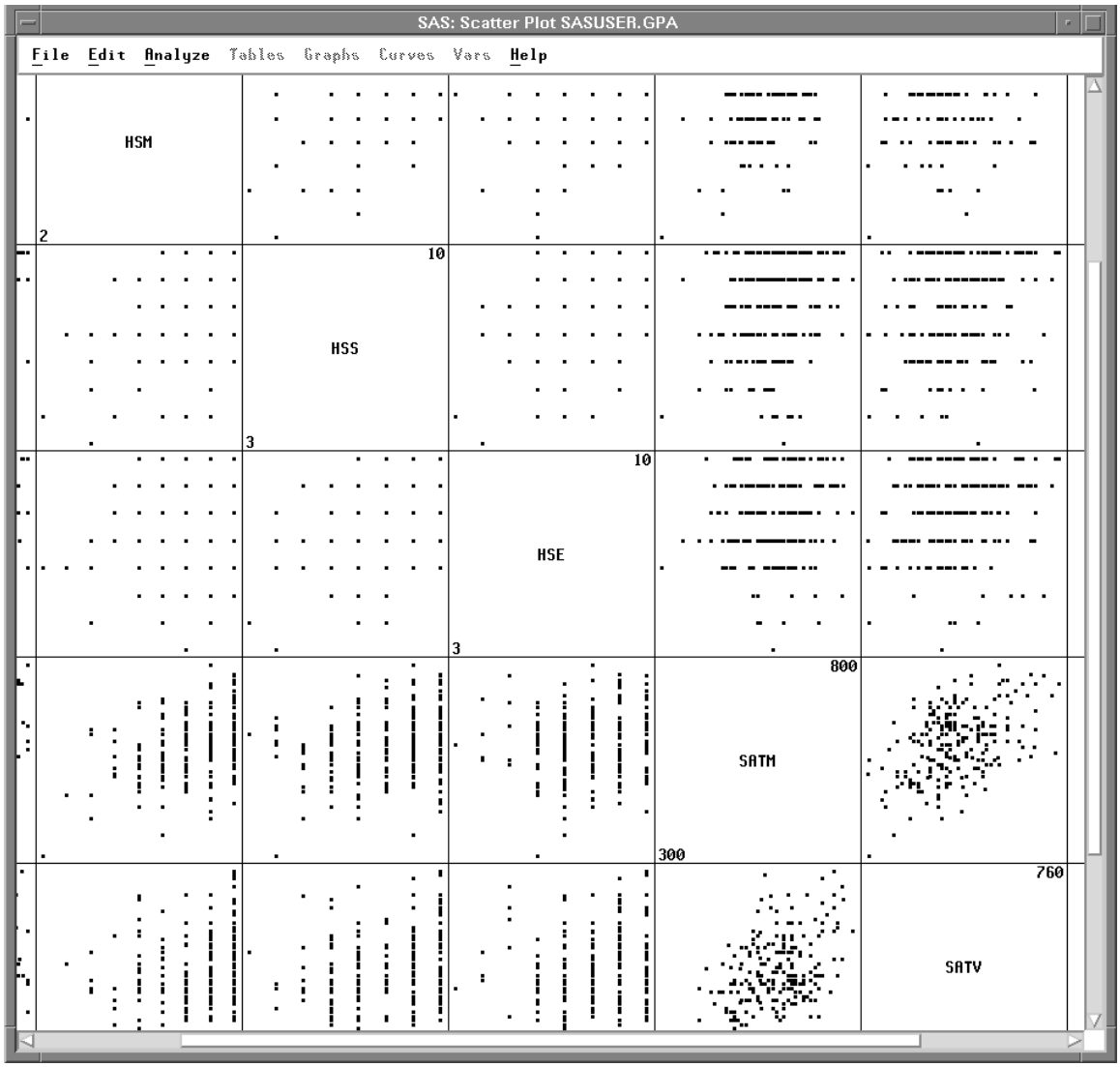


Figure 25.6. Zooming In

⟹ **Move the magnifying glass to the edge of the window and click several times.**
When it is near the edge of the window, the magnifying glass is small.

Clicking near the edge makes objects smaller until all objects fit in the window.

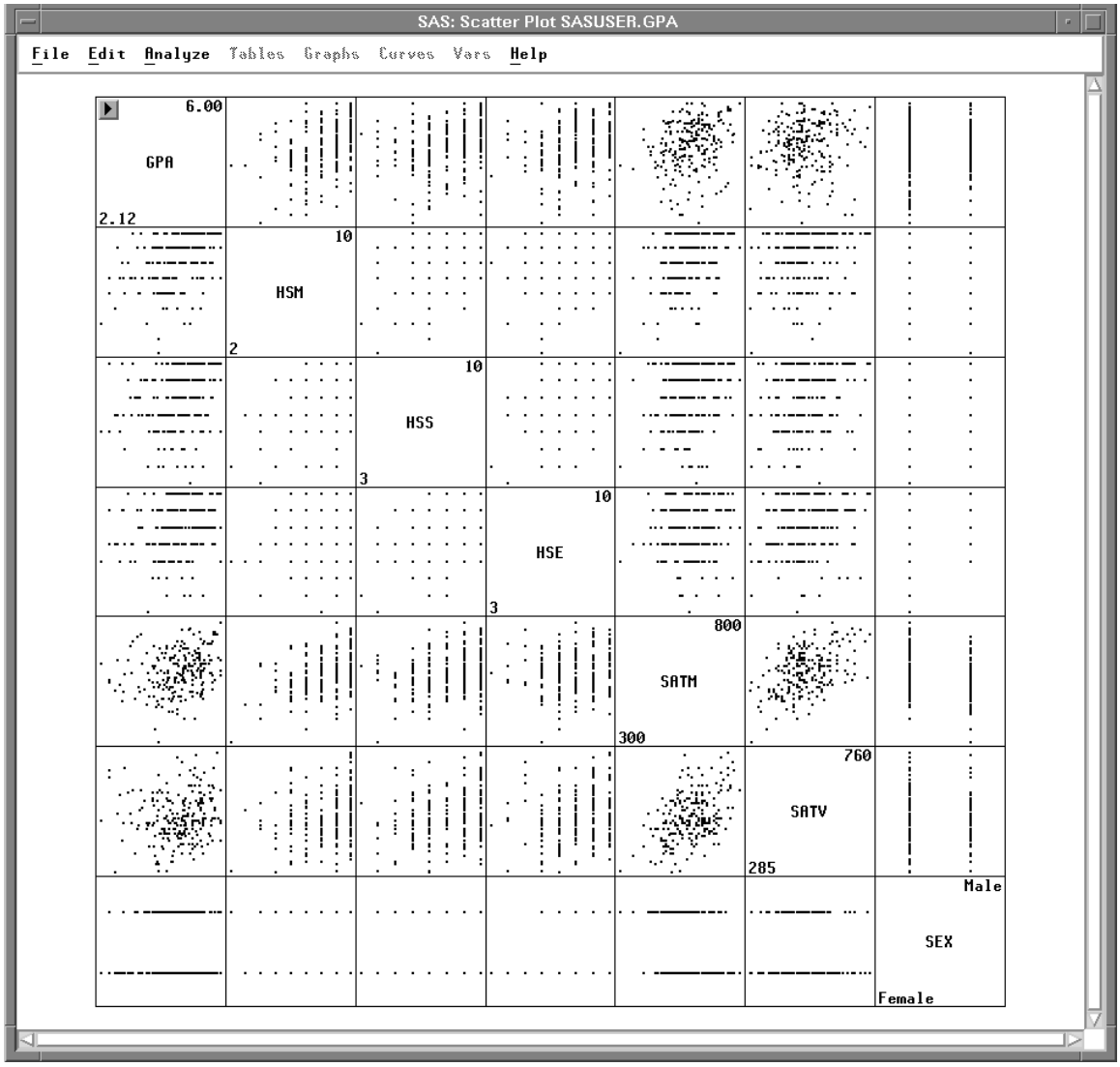


Figure 25.7. Zooming Out

⟹ **Click several times between the center and the edge of the window.**
The degree of magnification is proportional to the distance of your cursor from the center or the edge of the window. Clicking between the center and the edge makes fine adjustments. By clicking in this area, you can give the plots exactly the size you want.

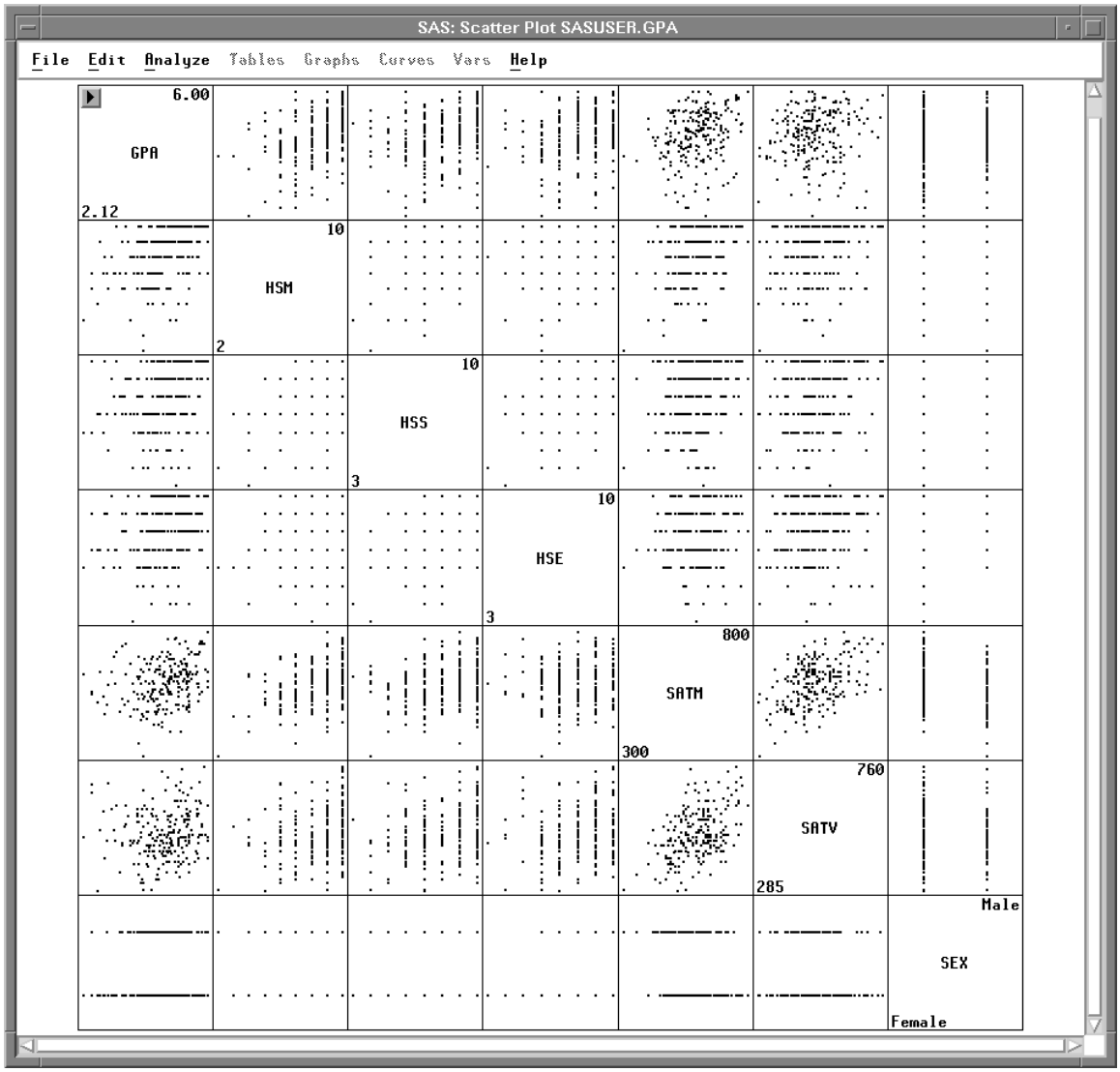


Figure 25.8. Making Fine Adjustments

To zoom in on a specific area, you can drag a rectangle with the magnifying glass.

⟹ **Drag a rectangle around the plot of GPA versus HSM.**
On some hosts, to drag a rectangle it is necessary to begin moving the mouse as soon as you depress the mouse button.

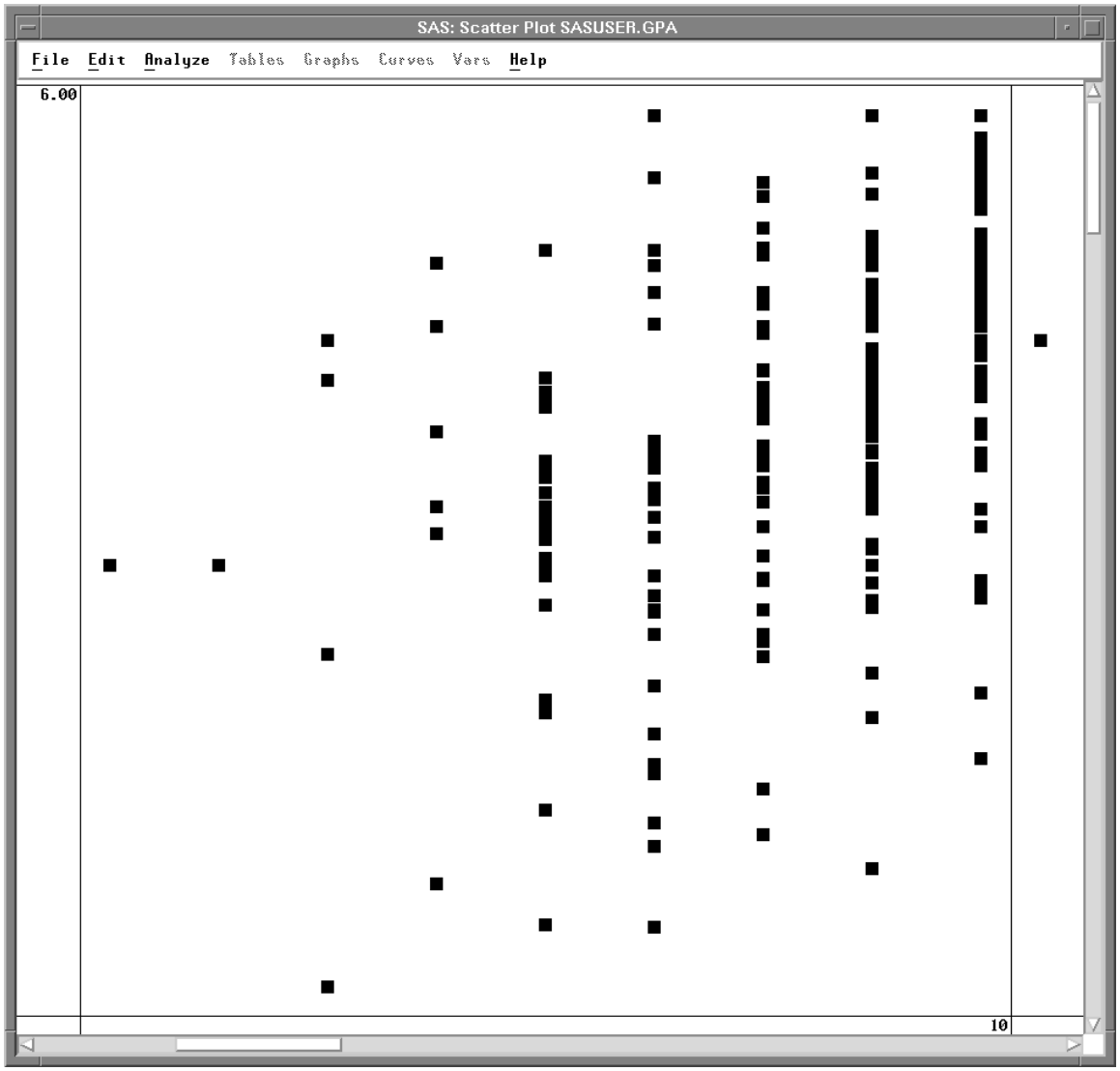


Figure 25.9. Zooming in on **GPA** versus **HSM**

You can restore the original size of the plots by clicking repeatedly near the edge of the window. If you prefer, instead of clicking repeatedly, you can press the mouse button down and hold it down. On most hosts, holding has the same effect as repeated clicks.

When you have zoomed in far, you may find it easier to **Renew** the window, as described in the next section.

Renewing Windows

Renewing restores the original state of the window. Renewing also gives you the opportunity to change the variables and options used to create the window.

⟹ **Restore the arrow tool by clicking on the arrow button in the Tools window.**

⟹ **Choose Edit:Windows:Renew.**

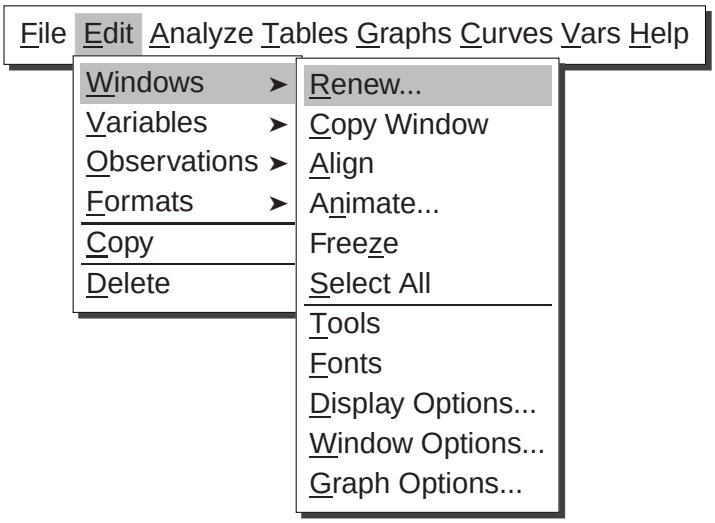


Figure 25.10. Edit:Windows Menu

This displays the Scatter Plot variables dialog used to create the window.

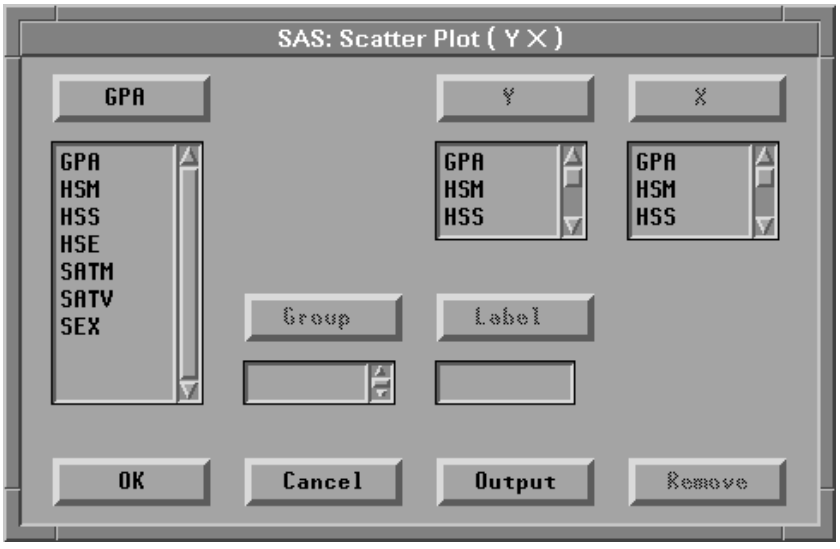


Figure 25.11. Scatter Plot Variables Dialog

⟹ **Click OK to re-create the scatter plot matrix at its original size, as shown in Figure 25.3.**

You can also use **Edit:Windows:Renew** to adjust variables and options associated with your window.

⟹ **Choose Edit:Windows:Renew again to display the variables dialog.**

⟹ **In the dialog, select SATM, SATV, and SEX in both Y and X lists.**

⟹ **Click Remove to remove these variables.**

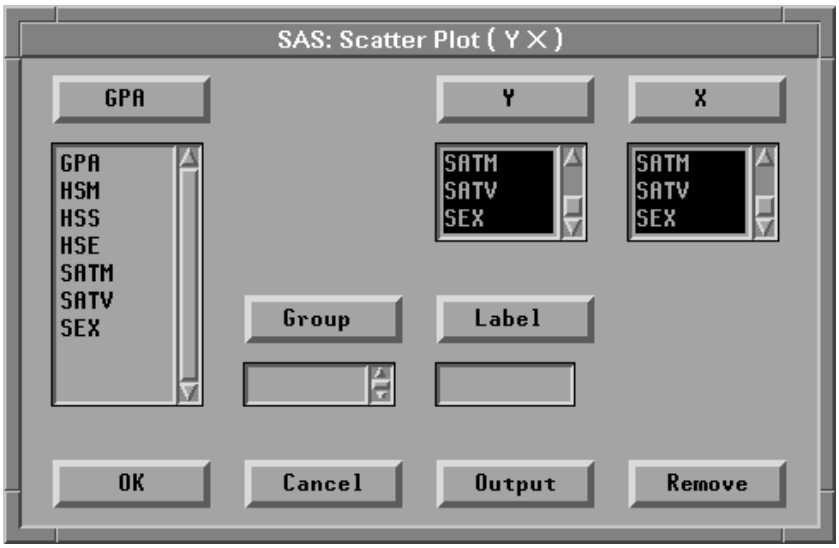


Figure 25.12. Removing Variables

⟹ **Click Output to display the output options dialog.**

⟹ **In the options dialog, click on the Labels button to display variable labels.**

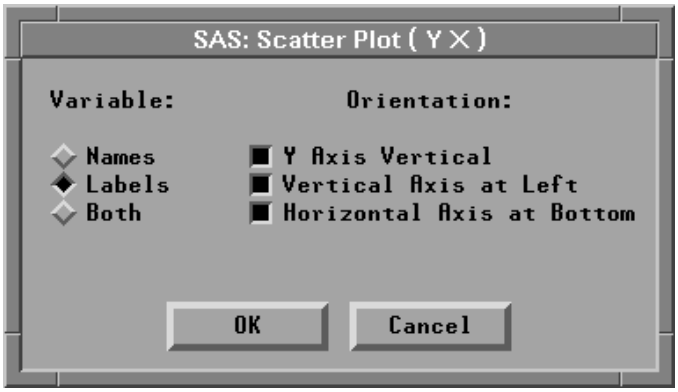


Figure 25.13. Setting Variable Labels

⟹ **Click OK in both dialogs to renew the window.**
The matrix that was seven-by-seven is now four-by-four, and it displays variable labels instead of names.

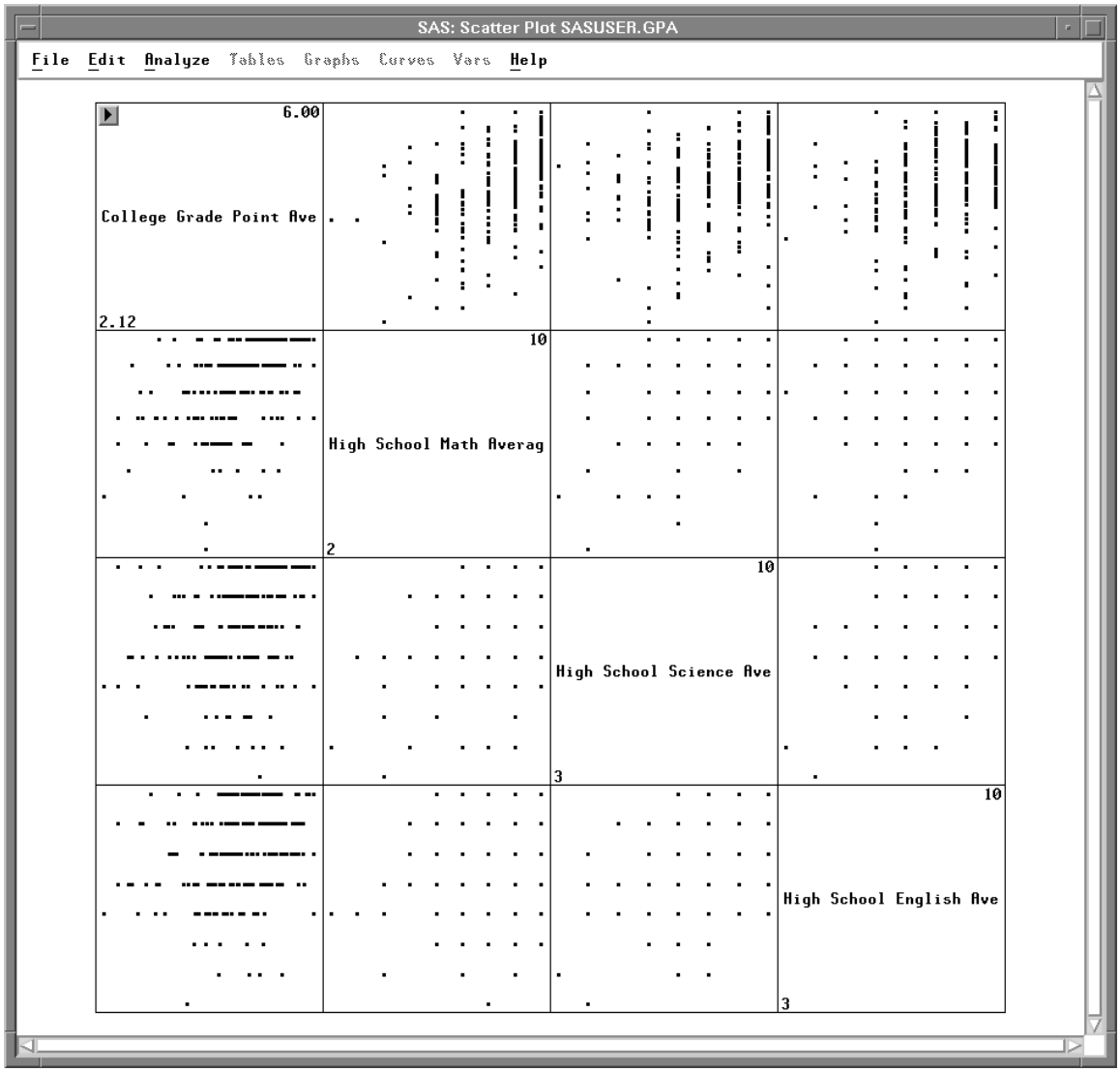


Figure 25.14. Renewed Window

To reset the scatter plot output to display variable names again, follow the same steps to display the scatter plot options dialog, then click on the **Names** button under **Variable:** in the dialog.

⊕ **Related Reading:** Scatter Plot Matrix, Chapter 5, Chapter 35.

Adding and Deleting

Many windows contain **Graphs** and **Tables** menus that enable you to add the most commonly used graphs and tables to any window. For example, in the Fit window you can add residual plots; in the Distribution window you can add tests for distributions.

If a graph you need is not listed in the **Graphs** menu, you can use the **Analyze** menu to add any graph to any window. For example, suppose you want to create a scatter plot with marginal histograms. To create this combination of graphs, first create a distribution analysis on two variables.

⟹ **Choose Analyze:Distribution (Y).**

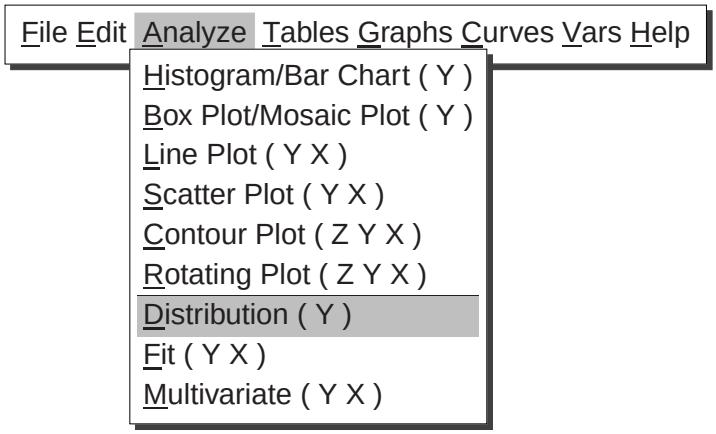


Figure 25.15. Analyze Menu

This displays the Distribution variables dialog.

⟹ **Select GPA and HSM, then click the Y button.**
This assigns **GPA** and **HSM** the **Y** role in the Distribution analysis.

Figure 25.16. Distribution Variables Dialog

⟹ **Click the Output button.**
This displays the output options dialog.

⟹ **In the output dialog, turn off all options except Histogram/Bar Chart.**

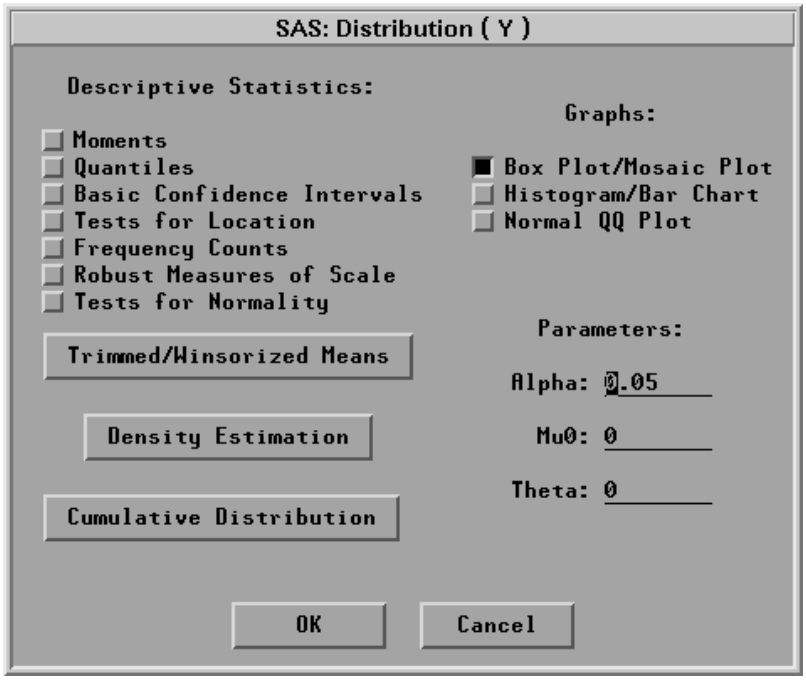


Figure 25.17. Output Options Dialog

⟹ **Click OK in both dialogs to create the distribution analysis.**

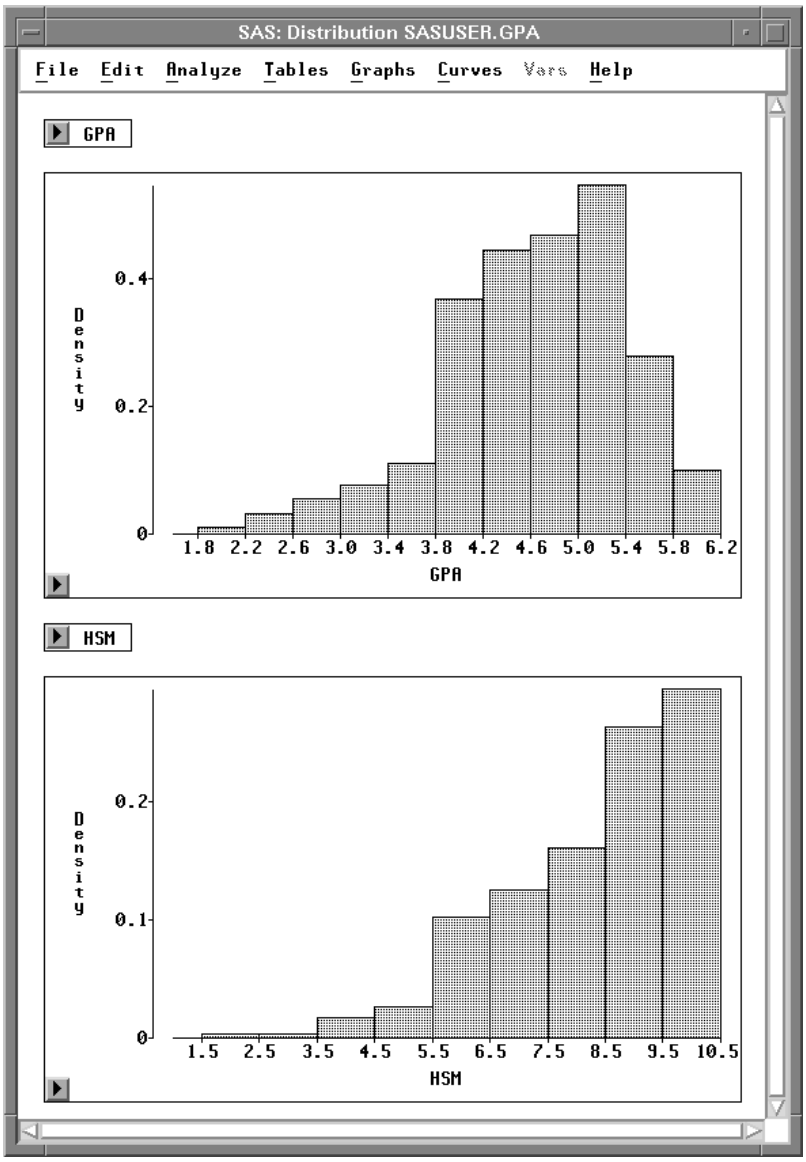


Figure 25.18. Distribution Window

Now you have a distribution window with two histograms. To add a scatter plot of both variables, follow these steps.

⟹ **Drag the bottom right corner of the window to the right.**
This increases the window size to provide blank space to the right of the histograms.

⟹ **Drag a rectangle to select an area in the window.**

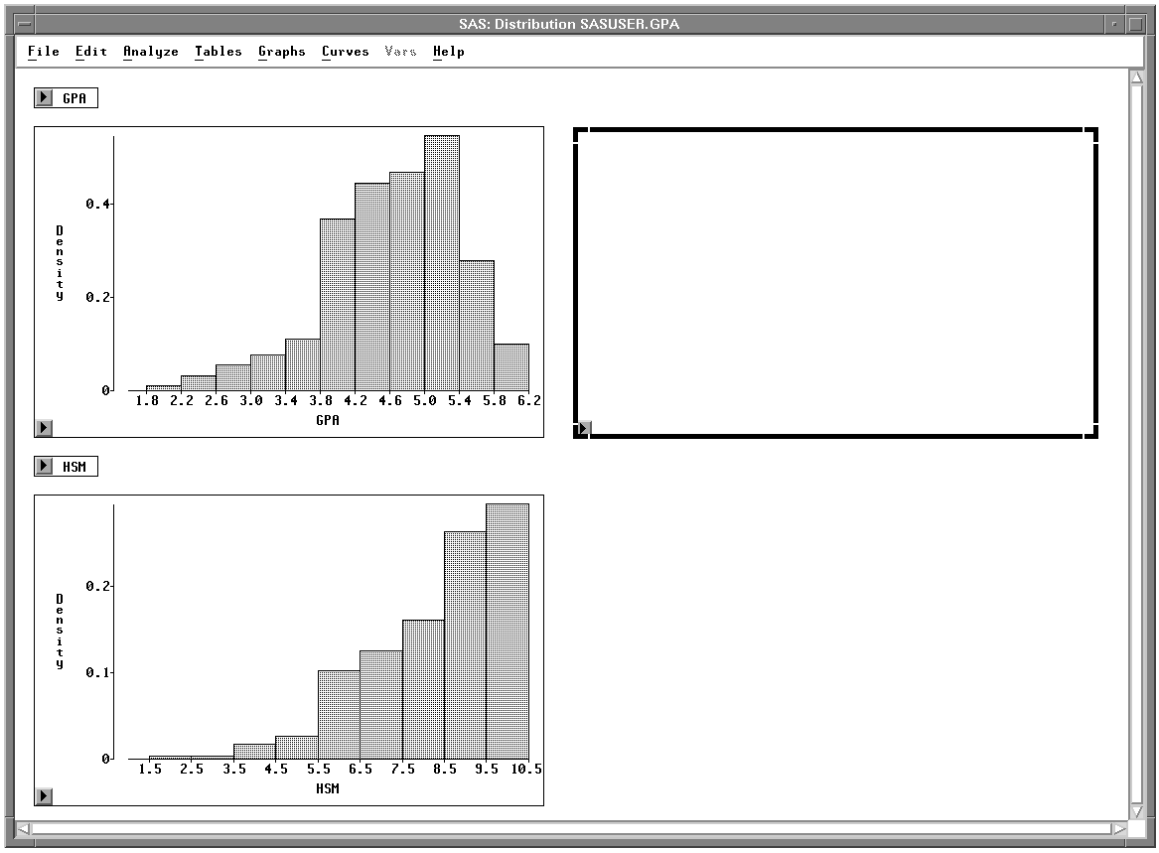


Figure 25.19. Area Selected

⟹ **Choose Analyze:Scatter Plot (Y X).**
This displays the scatter plot variables dialog.

⟹ **In the dialog, assign GPA the Y role, and HSM the X role.**

⟹ **Click OK to add the scatter plot to the distribution window.**

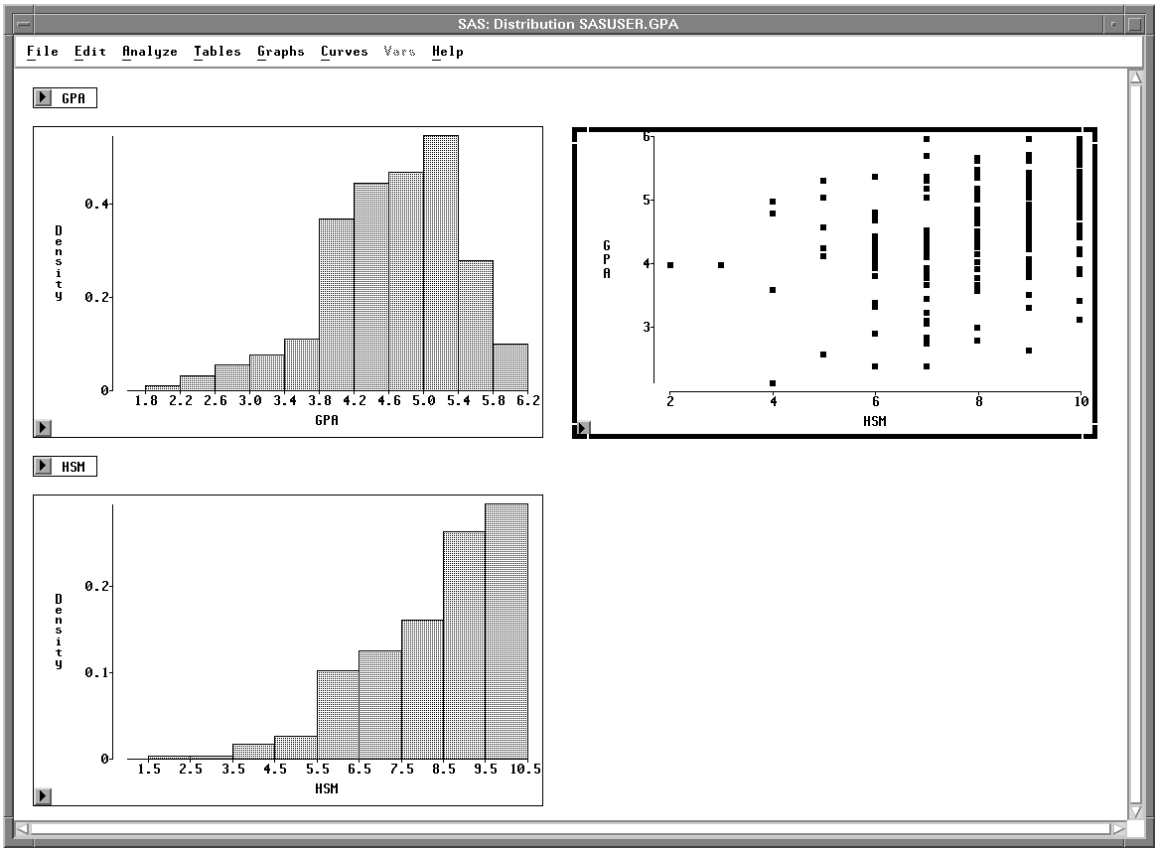


Figure 25.20. Distribution Window with Scatter Plot

You can delete any graph or table in the distribution window. For example, in this window the two small tables that contain variable names are not needed.

⟹ **Click on any edge of the GPA table to select it.**

⟹ **Use extended selection to select the HSM table also.**

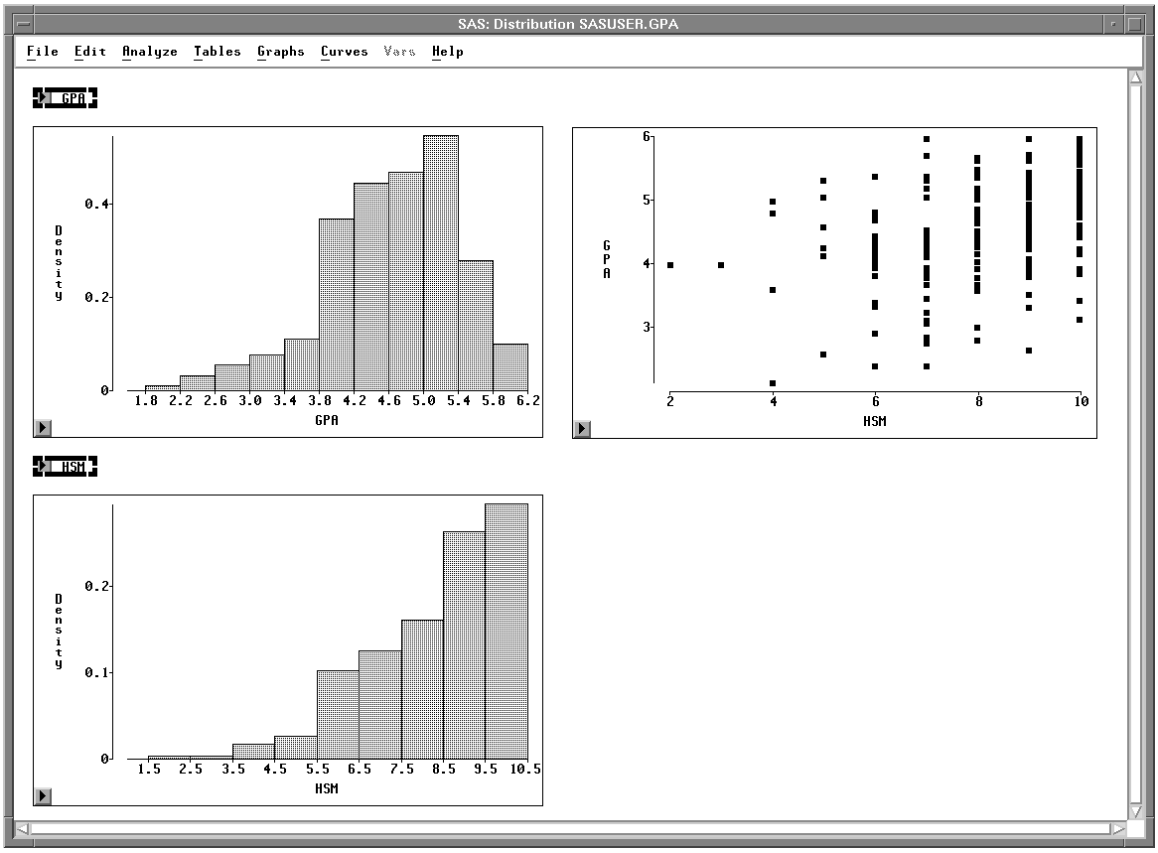


Figure 25.21. Tables Selected

⟹ **Choose Edit:Delete to delete the tables.**

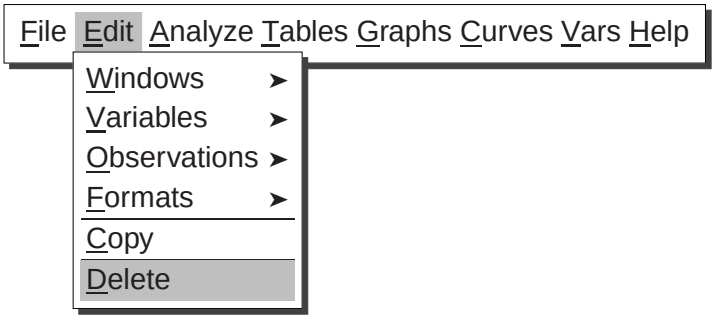


Figure 25.22. Edit:Windows Menu

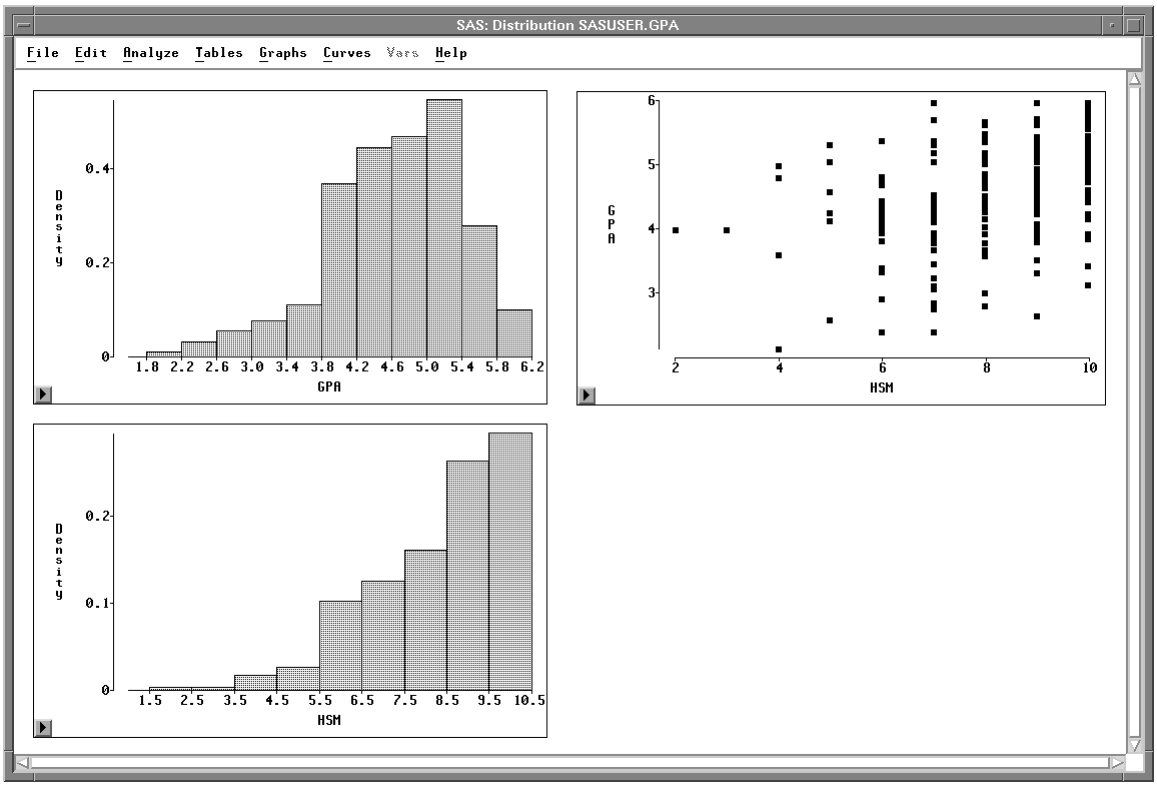


Figure 25.23. Tables Deleted

By choosing from the **Analyze** menu and choosing **Edit:Delete**, you have created a window containing one scatter plot and two histograms. In the same manner, you can add any graph and delete any graph or table in a window.

Moving and Sizing

Now you have a window containing one scatter plot and two histograms. To make marginal histograms, you should position the graphs so that common axes are parallel.

You can move any graph or table by dragging on its side.

⟹ **Drag the HSM histogram below the scatter plot.**
Press the mouse button down on any side of the histogram. Move the mouse to the right. Release the mouse button when you have the histogram positioned below the scatter plot.

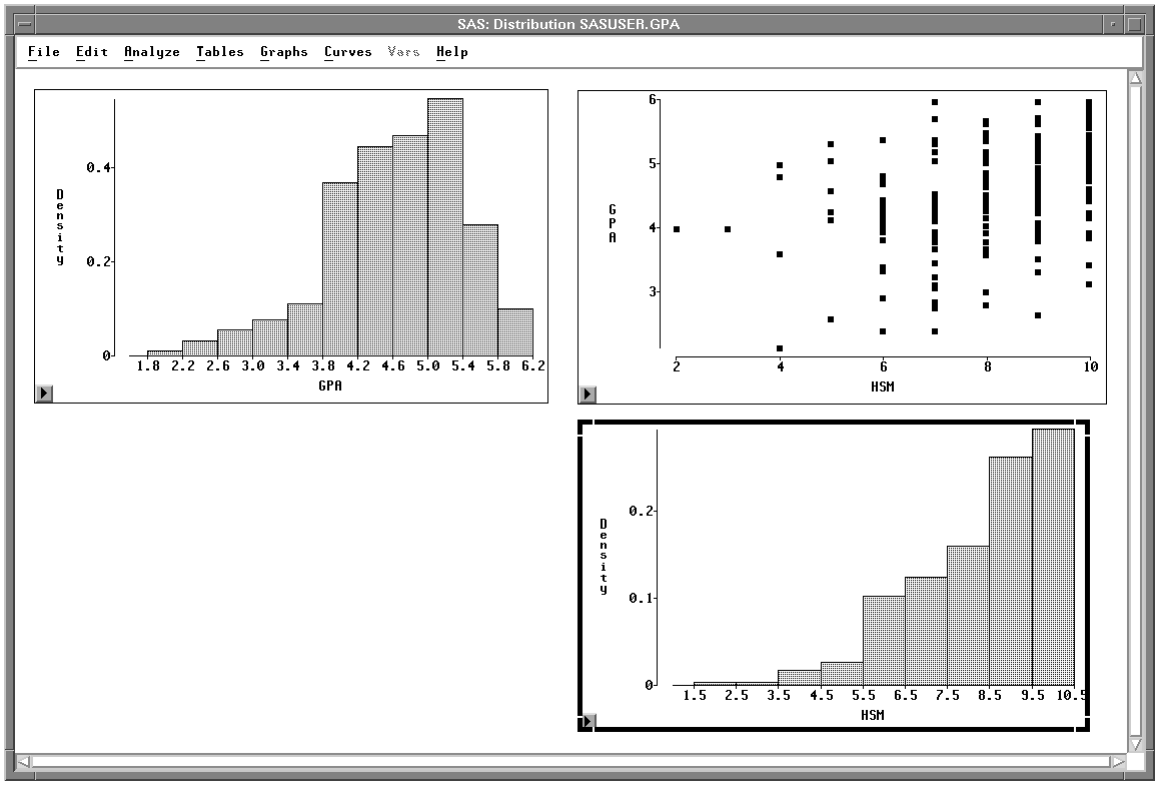


Figure 25.24. Histogram Moved

Now the histogram is in approximately the right place, but it is too large and its orientation is wrong. A marginal histogram should be smaller and the bars should be pointing downward.

You can resize and reorient any graph by dragging on a corner.

⟹ **Drag the lower right corner of the HSM histogram upward.**
Press the mouse button down on the lower right corner. Move the mouse upward. Release the mouse button when the histogram is about half its original size.

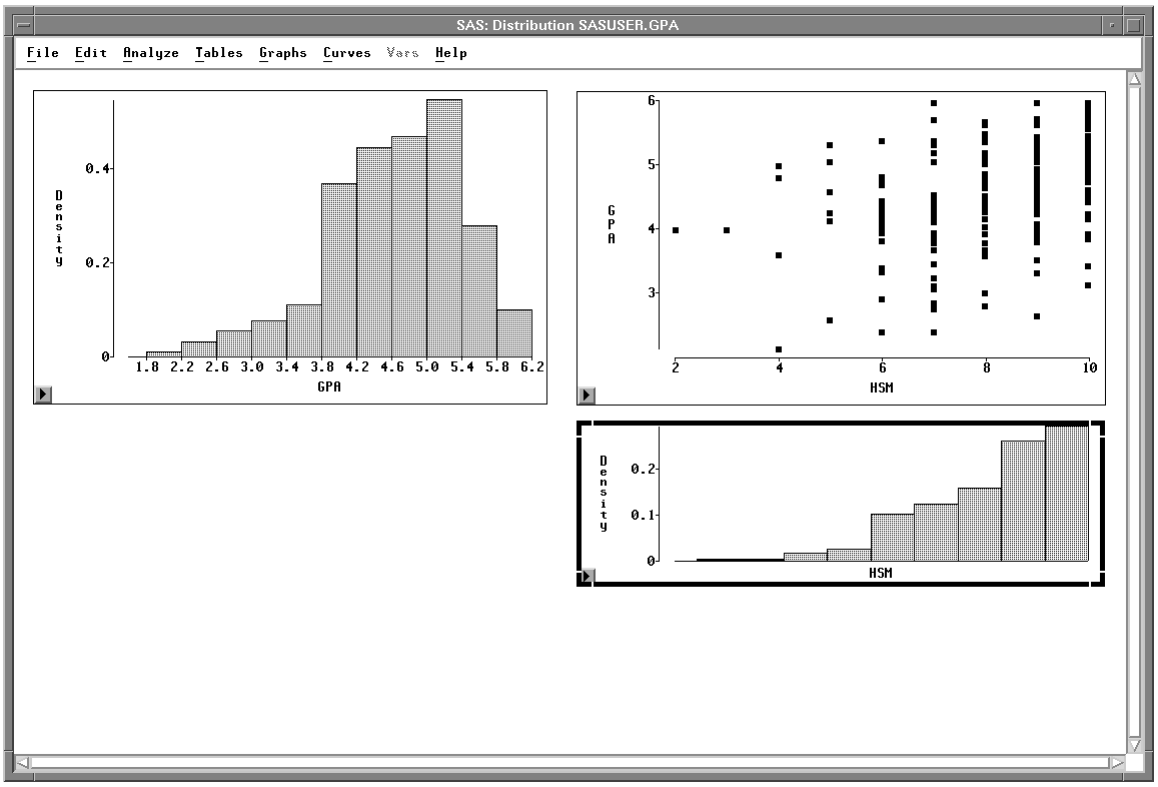


Figure 25.25. Histogram Resized

To change the orientation of the histogram, you can flip it over by dragging one corner across another.

⟹ **Drag the upper right corner down past the lower right corner.**
This flips the histogram so that the bars are pointing downward.

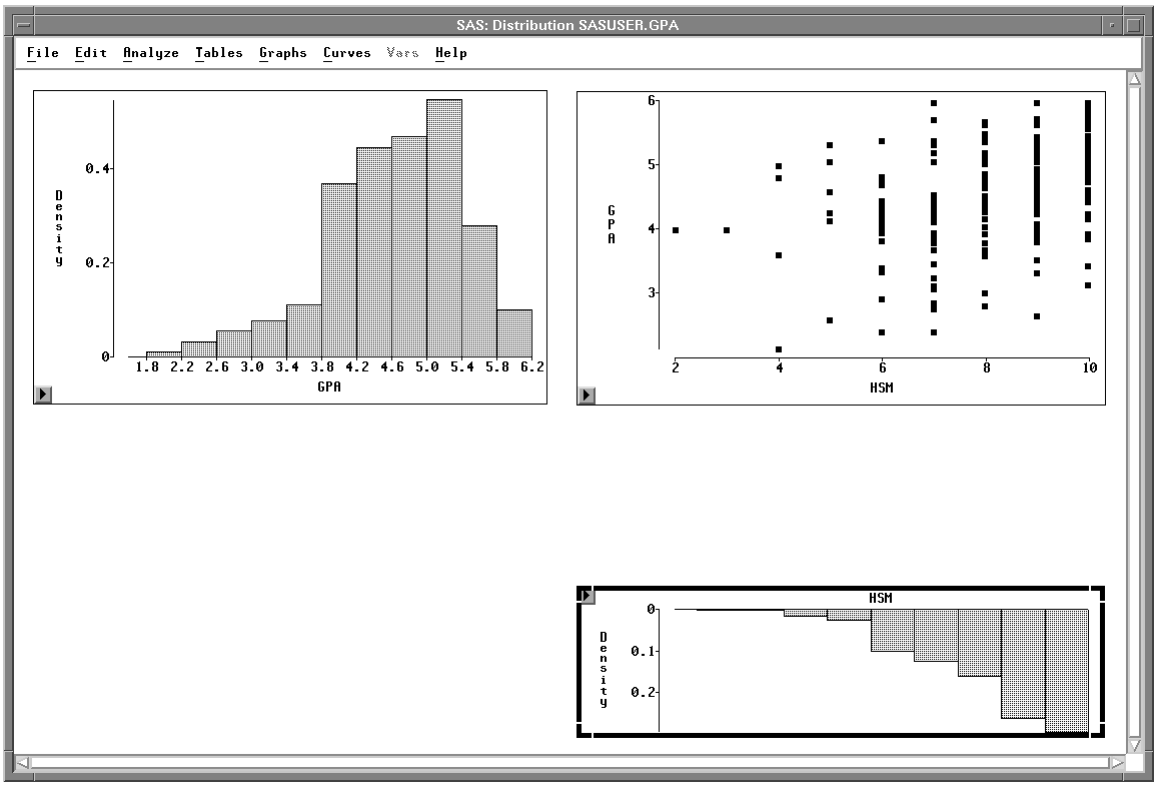


Figure 25.26. Histogram Reoriented

Now you have a scatter plot and one marginal histogram. To orient the other histogram correctly requires two flips.

⟹ **Drag the upper left corner of the GPA histogram past the lower right corner.** This flips the histogram across its diagonal. The bars that were vertical are now horizontal.

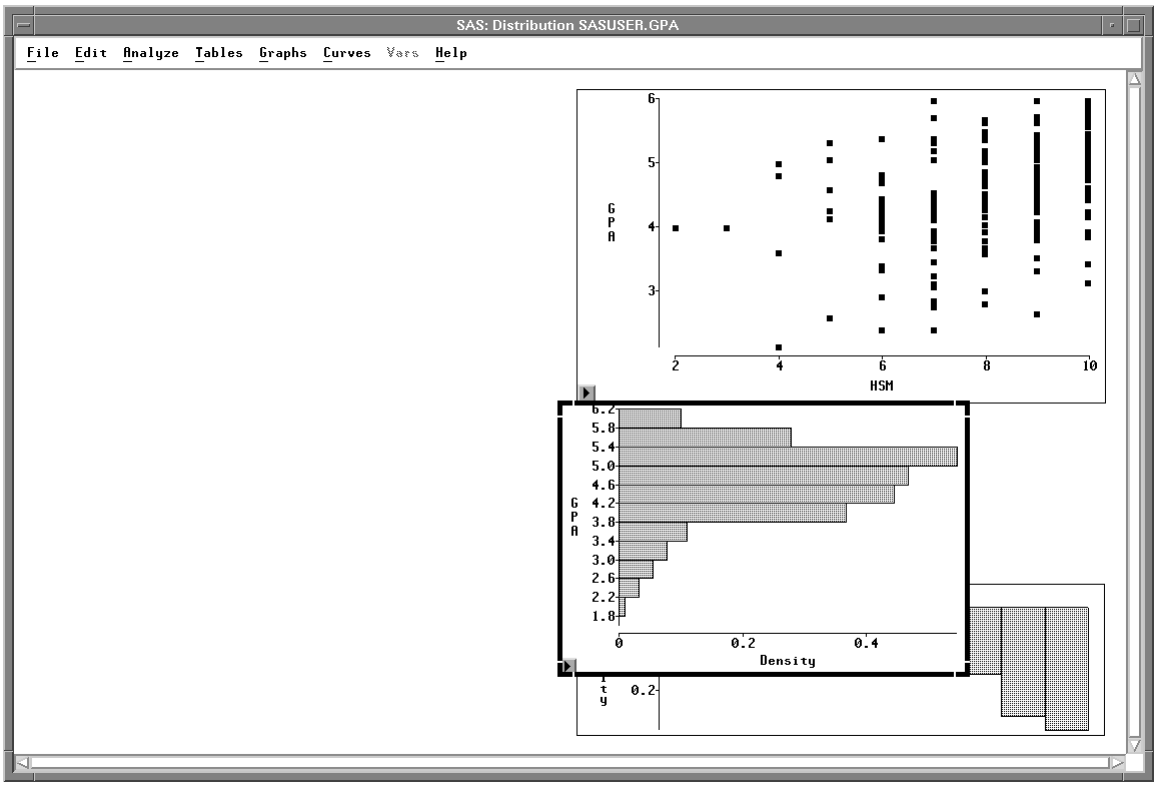


Figure 25.27. Histogram Reoriented

⟹ **Drag the upper right corner left past the upper left corner.**
This flips the histogram so that the bars are pointing to the left.

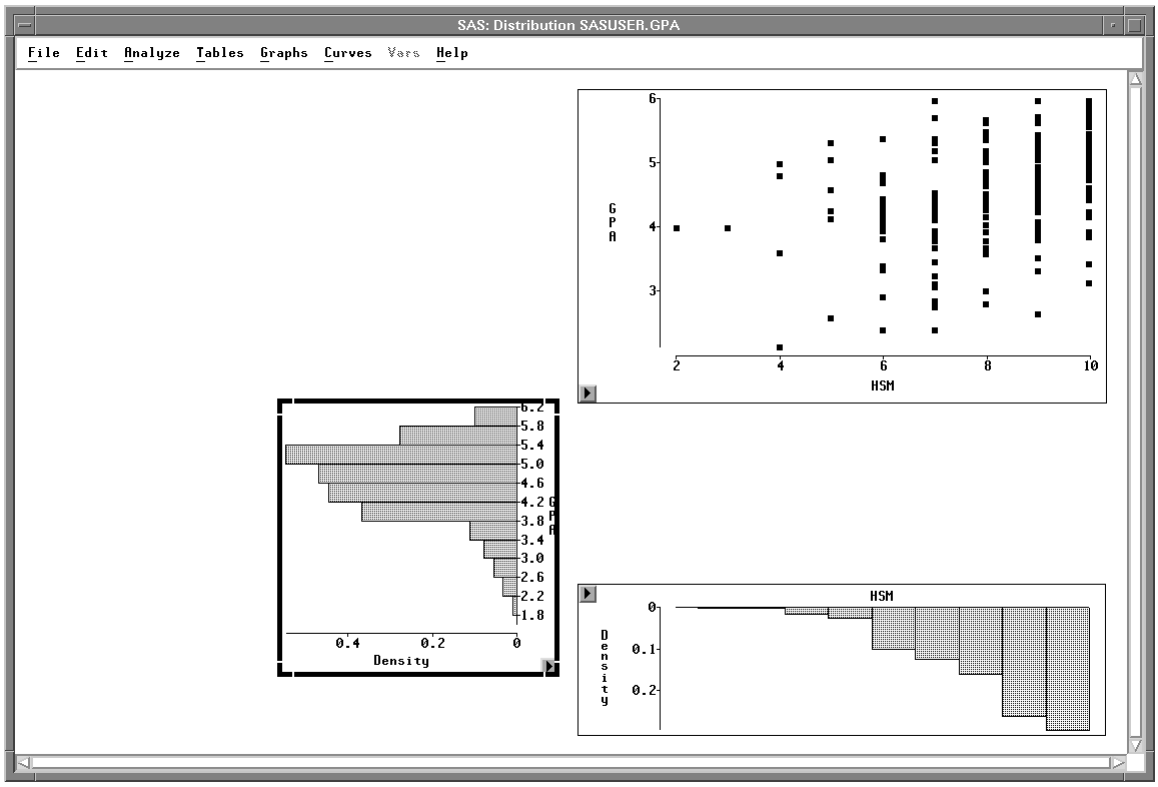


Figure 25.28. Histogram Reoriented

⟹ **Size and move both histograms to the margins of the scatter plot.**

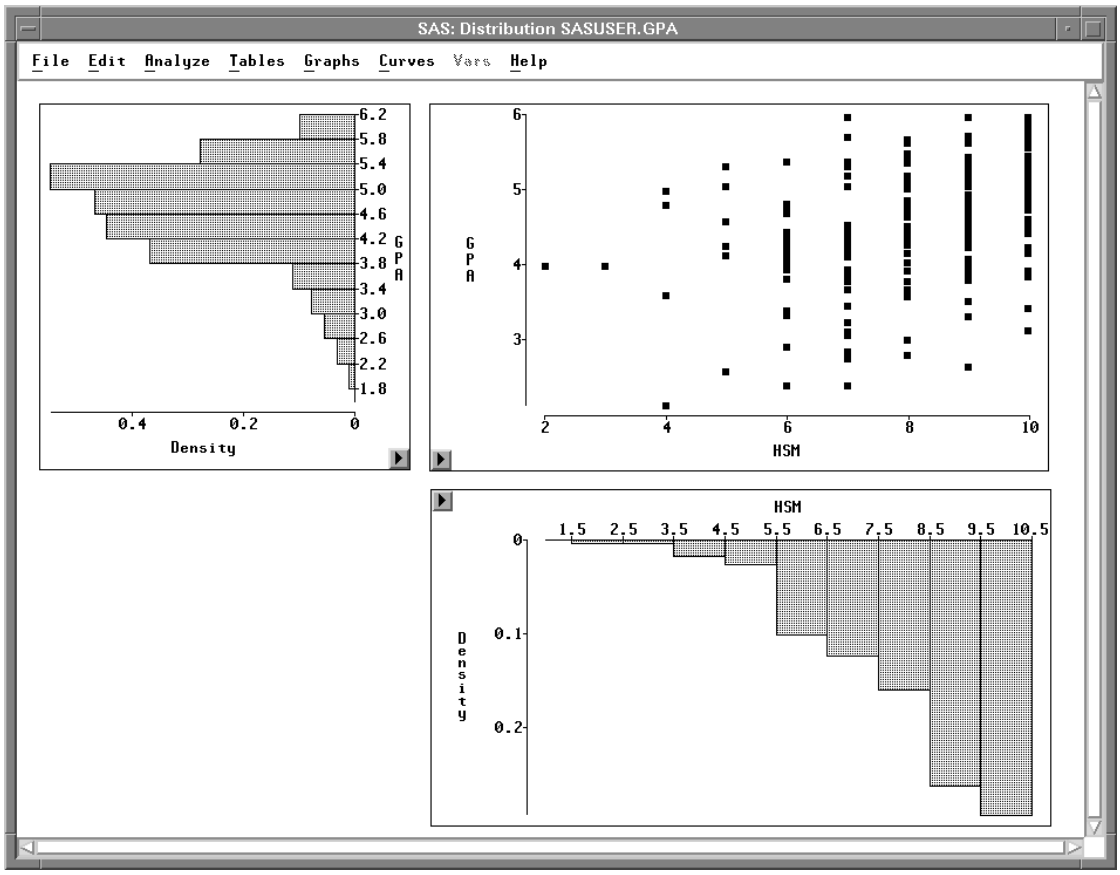


Figure 25.29. Scatter Plot with Marginal Histograms

Now both histograms are correctly oriented and placed at the margins of the scatter plot.

Aligning Graphs

Now that you have created a scatter plot with marginal histograms, you may notice that the axes are not perfectly aligned. For example, the tick label 1.5 in the **HSM** histogram appears to the right of the tick label 2 in the scatter plot. Similarly, the tick label 6.20 in the **GPA** histogram appears below the tick label 6.00 in the scatter plot. This occurs because, by default, axes are chosen to maximize the display of the data. You can override this behavior to align axes in different graphs.

⟹ **Click once in any empty area to deselect the histogram.**

⟹ **Choose Edit:Windows:Align.**
This aligns the **HSM** and **GPA** axes in all graphs.

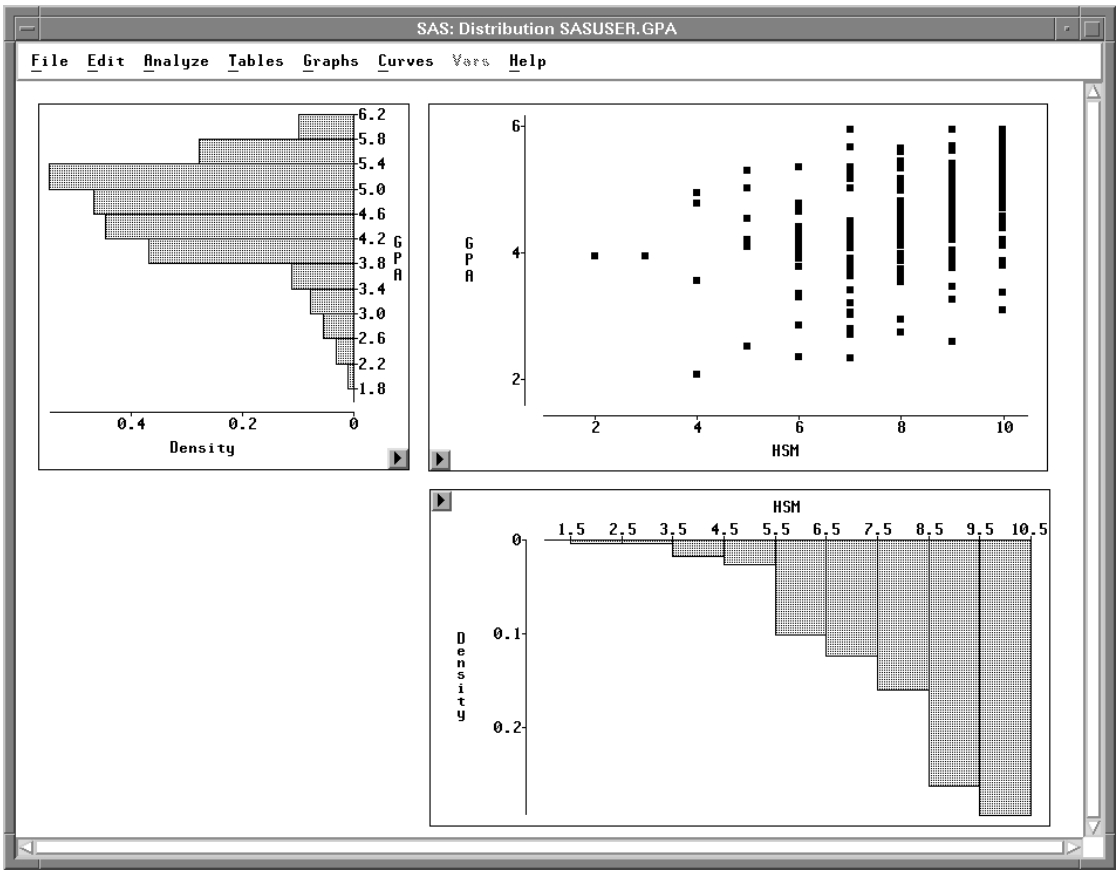


Figure 25.30. Graphs Aligned

You can align any axes that display the same variable. When you do not want to align all axes in a window, select the axes of interest before choosing **Edit:Windows:Align**.

Once you have moved, sized, added, deleted, and aligned objects in your windows, you will often want to save and print them. The next three chapters describe how to save and print data, graphs, and tables.

The correct bibliographic citation for this manual is as follows: SAS Institute Inc., *SAS/INSIGHT User's Guide, Version 8*, Cary, NC: SAS Institute Inc., 1999. 752 pp.

SAS/INSIGHT User's Guide, Version 8

Copyright © 1999 by SAS Institute Inc., Cary, NC, USA.

ISBN 1–58025–490–X

All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without the prior written permission of the publisher, SAS Institute Inc.

U.S. Government Restricted Rights Notice. Use, duplication, or disclosure of the software by the government is subject to restrictions as set forth in FAR 52.227–19 Commercial Computer Software-Restricted Rights (June 1987).

SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

1st printing, October 1999

SAS® and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries.® indicates USA registration.

Other brand and product names are registered trademarks or trademarks of their respective companies.

The Institute is a private company devoted to the support and further development of its software and related services.