CHAPTER 9

PAGE TOOLS

INFOCUS

WPL_V508

When you create drawings on paper you have many tools at your disposal. For example, it would be unusual to attempt to create precise drawings without the assistance of rulers and grid lines.

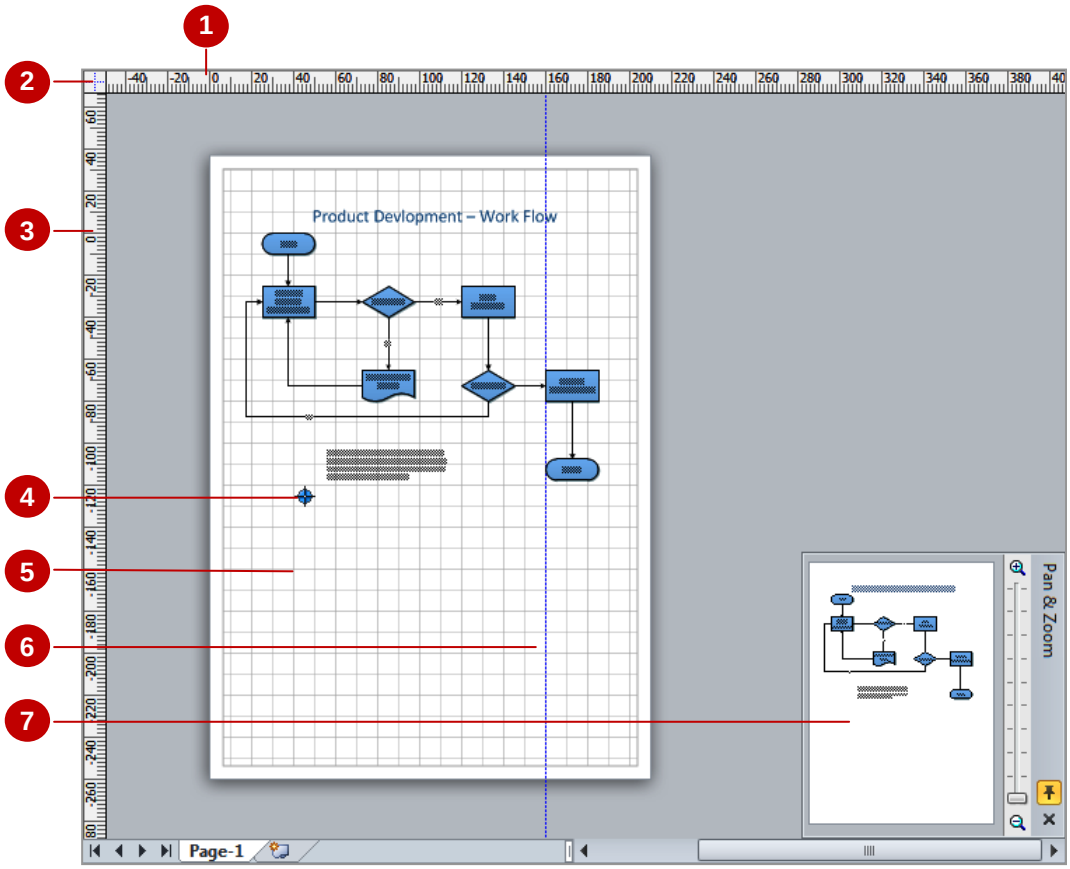
Tools such as ***rulers***, ***grid lines***, ***guides***, ***zoom*** functionality and a ***scaling*** system are available in Microsoft Visio to provide accuracy when drawing diagrams.

In this session you will:

- ✓ gain an understanding of the various page tools
- ✓ learn how to zoom in to and out of a drawing
- ✓ learn how to use the ***Pan*** & ***Zoom*** window
- ✓ learn how to display rulers and grid lines
- ✓ learn how to change grids and rulers
- ✓ learn how to craete guides and guide points
- ✓ learn how to use guide and guide points
- ✓ learn how to work with rulers
- ✓ learn how to change the scale.

UNDERSTANDING PAGE TOOLS

Microsoft Visio comes complete with a number of tools that help you to work with and navigate drawing pages. Most of these tools assist you with accurately aligning objects and additionally you can use the ***Pan & Zoom*** window to quickly pan (or move around) and zoom into the drawing. Page tools are mostly found on either the ***View*** tab of the ribbon or on the status bar.



1	***Horizontal Ruler Zero Point***	***Zero point*** on the horizontal ruler indicates the position of the 0 (zero). It is the starting point for measurement and can be moved to any position that you need. By default it is at the top left corner of the page.
2	***Intersection of Rulers***	If you change the zero point for either ruler, you will change the zero point reference of the page. By double-clicking on the point of ***intersection of the two rulers***, you can quickly reset the zero point reference of the page back to the default bottom left corner.
3	***Vertical Ruler Zero Point***	The term ***zero point*** can also be used to refer to the intersection of the two rulers' zero points. By default, this is the bottom left corner of the page and represents the point around which a page is rotated. In this example, it has been moved quite high up the page.
4	***Guide Point***	***Guide points*** are drawn to enable you to align objects on top of each other or by their corners.
5	***Grid Lines***	***Grid lines*** assist you in the placement of objects on a page. The grid can be set to different levels of spacing to give you more or fewer lines. The spacing between the grid lines is also relative to the level of zoom.
6	***Guides***	***Guides*** can be dragged onto the page to enable you to accurately align objects in a position not indicated by a grid line.
7	***Pan & Zoom Window***	The ***Pan & Zoom*** window enables you to selectively zoom parts of the page.

ZOOMING

Being able to ***zoom in*** to your drawing means that you can work with greater accuracy, whereas ***zooming out*** enables you to gain an overall perspective of the drawing. There are a number of different ways to zoom in and out of a drawing and they include using the tools on the ribbon or status bar. You can also use your mouse, either with or without the keyboard.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file V508 Page Tools_1.vsd...

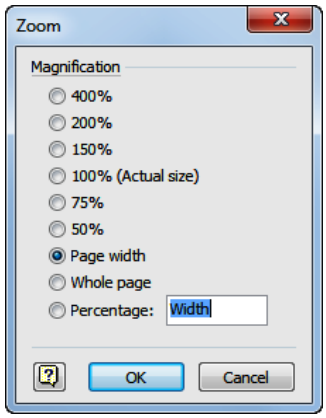
1. Click on the ***View*** tab, then click on ***Page Width*** in the ***Zoom*** group to zoom in so that the page width fills the drawing window
2. Click on ***Zoom*** in the ***Zoom*** group to open the ***Zoom*** dialog box

   Clicking on Zoom level 53% in the status bar will also open this dialog box…
3. Click on ***100%*** then click on **[OK]** to display the drawing at its actual size

   You can use the mouse to zoom in on an object…
4. Hold down Ctrl + Shift, then hover over the text block

   The pointer will change to a magnifying glass…
5. Click once to double the zoom
6. Hold down Ctrl + Shift, then right-click to halve the magnification
7. Click on ***Fit page to current window*** on the status bar

2



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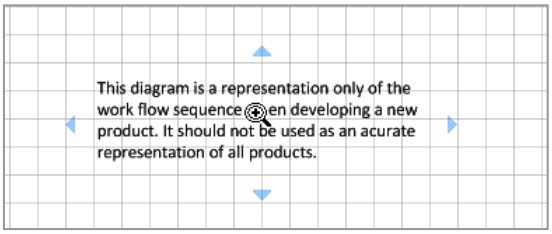

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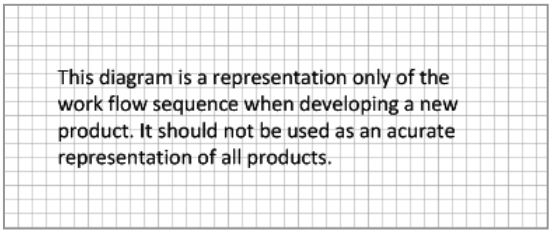

For Your Reference…

To change the zoom:

- Click on ***Zoom level*** 53% on the status bar to open the ***Zoom*** dialog box, or
- Click on ***Zoom In*** or ***Zoom Out*** on the status bar, or
- Press Ctrl, Shift and left-click to zoom in or right-click to zoom out

Handy to Know…

- If you have a mouse with a rotating wheel on the top, you can hold down Ctrl and rotate the wheel up and down to zoom in and out.
- Click on ***Full Screen*** on the status bar to display the complete drawing in full screen mode. To return to normal mode again, press Esc.

USING THE PAN & ZOOM WINDOW

The ***Pan & Zoom*** window displays a thumbnail of the page in the corner of the drawing window. This miniature gives you an overall perspective of the page layout when you are using high magnifications. The ***Pan & Zoom*** window uses a red box to highlight the area of the page that is currently displayed in the drawing window and you can easily move this to pan to another area.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file V508 Page Tools_2.vsd...

1. Click on ***Zoom level*** 53% in the status bar and change the zoom to ***150%***
2. Click on ***Pan & Zoom Window*** in the status bar

   The Pan & Zoom window will open in the bottom right corner of the drawing window, with the visible workspace indicated by a red box. You can change this by moving the box...
3. Move the mouse pointer to the centre of the red box, then drag it to the top of the ***Pan & Zoom*** window

   You can also adjust the active workspace...
4. Move the mouse pointer to the bottom right corner of the red box, then drag it down and out to increase the box size

   By encompassing a larger area of the Pan & Zoom window, you reduce the screen magnification to display that area of the page...
5. Click on ***Close*** to hide the ***Pan & Zoom*** window

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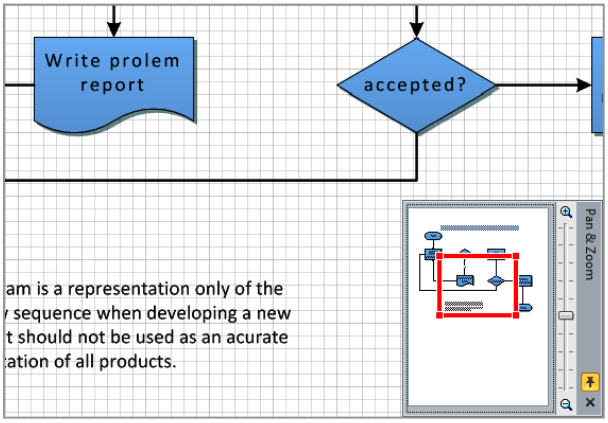

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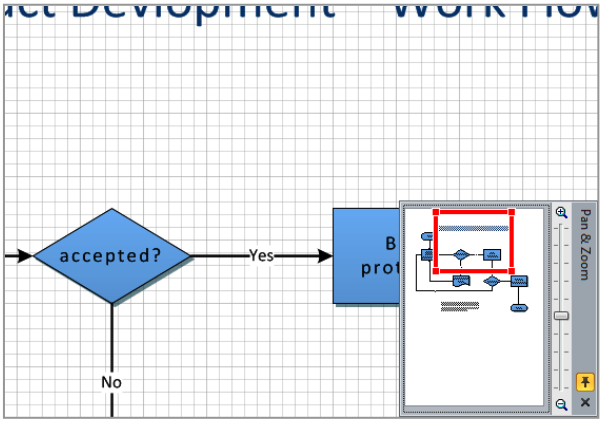

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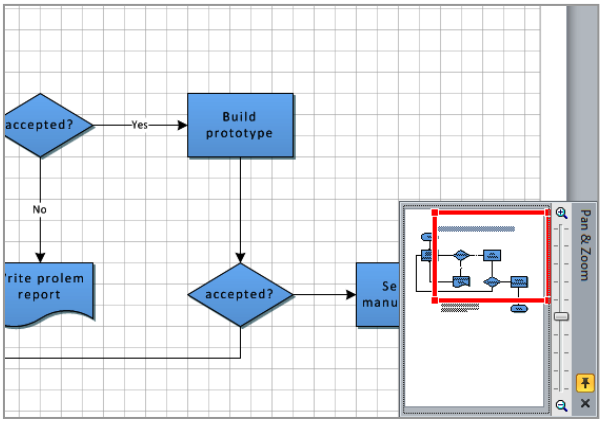


For Your Reference…

To ***view/hide*** the ***Pan & Zoom*** window:

1. Click on ***Pan & Zoom Window*** in the status bar

To ***change the area*** of the page viewed:

1. Drag the red box to a new position

To ***alter the size*** of the area of the page viewed:

1. Drag the edge of the box to resize it

Handy to Know…

- You can also open and close the ***Pan & Zoom*** window by clicking on ***Task Panes*** in the ***Show*** group (***View*** tab) and selecting ***Pan & Zoom***.
- You can use the vertical sliding control on the right side of the ***Pan & Zoom*** window to zoom in to and out of the drawing.

DISPLAYING GRIDS AND RULERS

Rulers and ***grid lines*** can assist you in placing objects in a drawing. The horizontal ruler runs across the top of the page and the vertical ruler runs down the left side of the page. Grid lines run across and down the page, letting you align objects with ease. However useful, you can also switch these features off to either see more of your screen or to 'unclutter' the drawing.

Try This Yourself:

Open File *Before starting this exercise you MUST open the file V508 Page Tools_3.vsd...*

1. Click on the ***View*** tab

   The Grid and Ruler options are toggles – you can turn them on and off. By default, the grid displays on the drawing page so the option is ticked...

2. Click on ***Grid*** in the ***Show*** group

   By selecting a ticked option, you will switch it off. In this instance, the grid will be no longer visible on the page...

3. Click on ***Ruler*** in the ***Show*** group

   Similarly, this action will hide the rulers which are displayed by default...

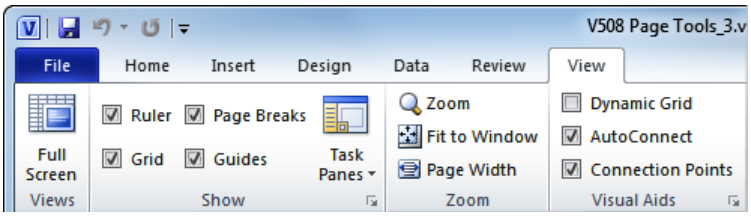
4. Click on ***Grid***

   The grid will reappear...

5. Click on ***Ruler***

   Now the rulers will be restored and the drawing window will appear in its original layout

1



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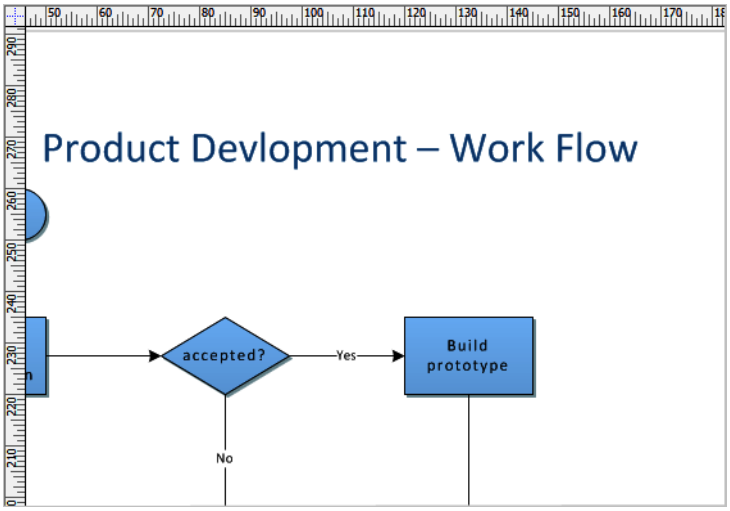

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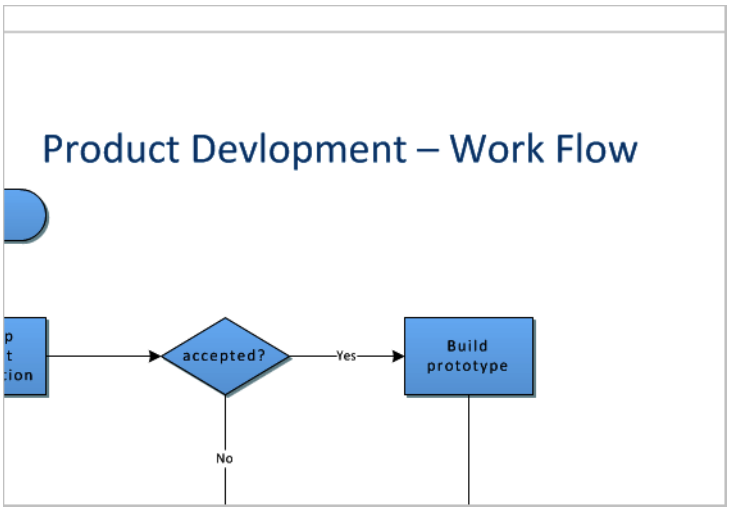

For Your Reference…

To ***show/hide rulers***:

1. Click on ***Ruler*** in the ***Show*** group on the ***View*** tab

To ***show/hide grids***:

1. Click on ***Grid*** in the ***Show*** group on the ***View*** tab

Handy to Know…

- Visio uses a variable grid so that, as you zoom in and out, the grid will change to best suit the level of zoom. For instance, if you zoom in, the grid lines will appear closer together – you are, in fact, seeing more detail and therefore more grid lines.

CHANGING GRIDS AND RULERS

Visio enables you to change the spacing between the grid lines and the number of marks on the ruler. The three settings are ***Fine***, ***Normal*** and ***Coarse*** and these can be applied to both rulers and grid lines. The vertical and horizontal aspects can be set independently. You can also set a fixed spacing for grid lines so that the spacing stays the same irrespective of the zoom.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open V508 Page Tools_4.vsd...

1. Change the ***Zoom*** to ***150%***
2. Click on the ***dialog box launcher*** for ***Show*** on the ***View*** tab to open the ***Ruler & Grid*** dialog box
3. Click on the drop arrow for ***Horizontal Subdivisions*** in ***Rulers*** and select ***Coarse***
4. Click on the drop arrow for ***Vertical Grid spacing*** in ***Grid*** and select ***Coarse***
5. Click on **[OK]**

   You will now see fewer increments on the horizontal ruler and fewer grid lines along the vertical aspect...
6. Change the ***Zoom*** to ***Fit page to current window***

   Notice that the changes are easier to appreciate at higher magnifications…
7. Repeat the above steps to restore the settings to ***Fine*** for all ***Subdivisions*** and ***Grid spacings***

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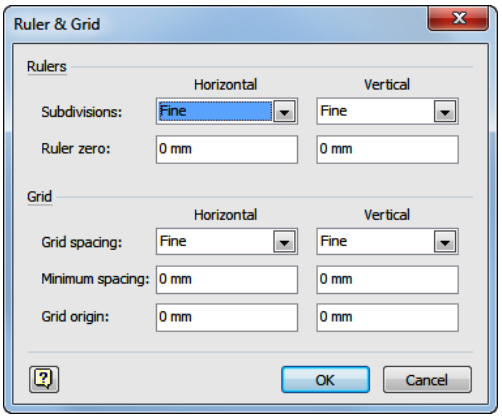

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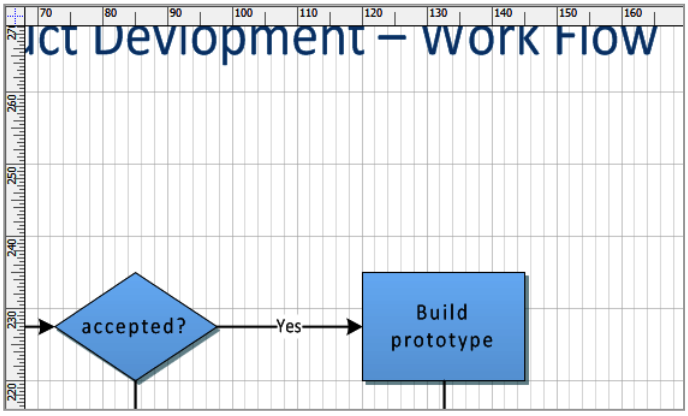

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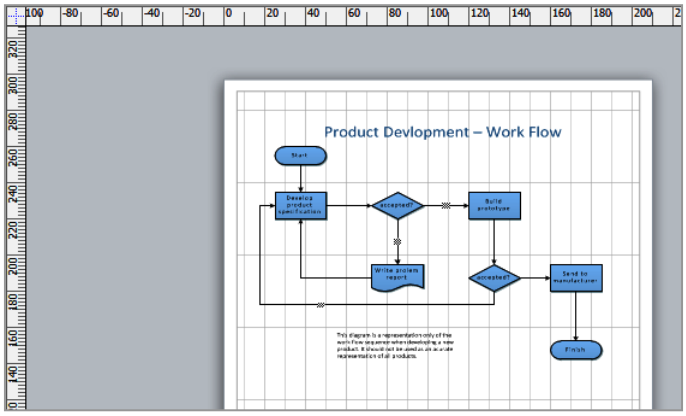


For Your Reference…

To ***change*** the ***grid*** and ***ruler spacing***:

1. Click on the ***dialog box launcher*** for ***Show*** on the ***View*** tab
2. Select the required ***Subdivisions*** and ***Ruler spacing*** settings
3. Click on **[OK]**

Handy to Know…

- You can create a static grid that does not change when you zoom in and out. To do this, set ***Horizontal*** and ***Vertical Grid spacing*** to ***Fixed*** in the ***Ruler & Grid*** dialog box.

SETTING GUIDES AND GUIDE POINTS

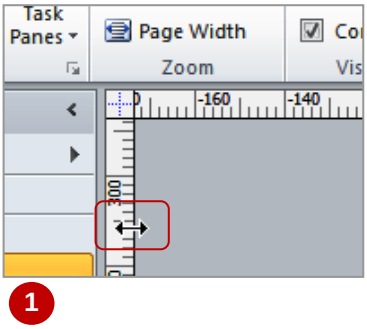
Visio features ***guides*** and ***guide points***. ***Guides*** are your own personal grid lines that you can place where ever you need them – either vertically or horizontally. They are used to align objects in a position not already marked by a grid line. ***Guide points*** are used to mark the intersection of two guides and are useful for centring objects on top of one another.

Try This Yourself:

Same File *Continue using the previous file with this exercise, or open V508 Page Tools_5.vsd...*

1. Hover the mouse pointer over the vertical ruler – the pointer will change to a double-headed arrow
2. Hold down the left mouse button and drag the mouse to the ***150mm*** mark on the horizontal ruler, then release the mouse button

   A blue vertical guide will be created in this position...
3. Hover the mouse pointer over the intersection of the two rulers (at the top left corner of the drawing window) – the pointer will change to a four-headed arrow
4. Hold down the left mouse button and drag the mouse to the junction of the ***50mm*** vertical grid line and ***120mm*** horizontal grid line
5. Release the mouse to create a guide point in this position



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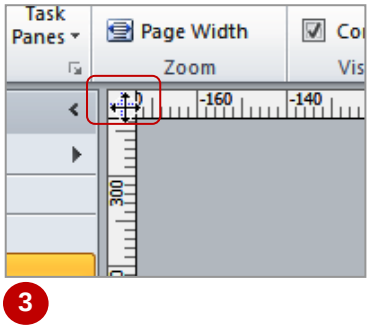

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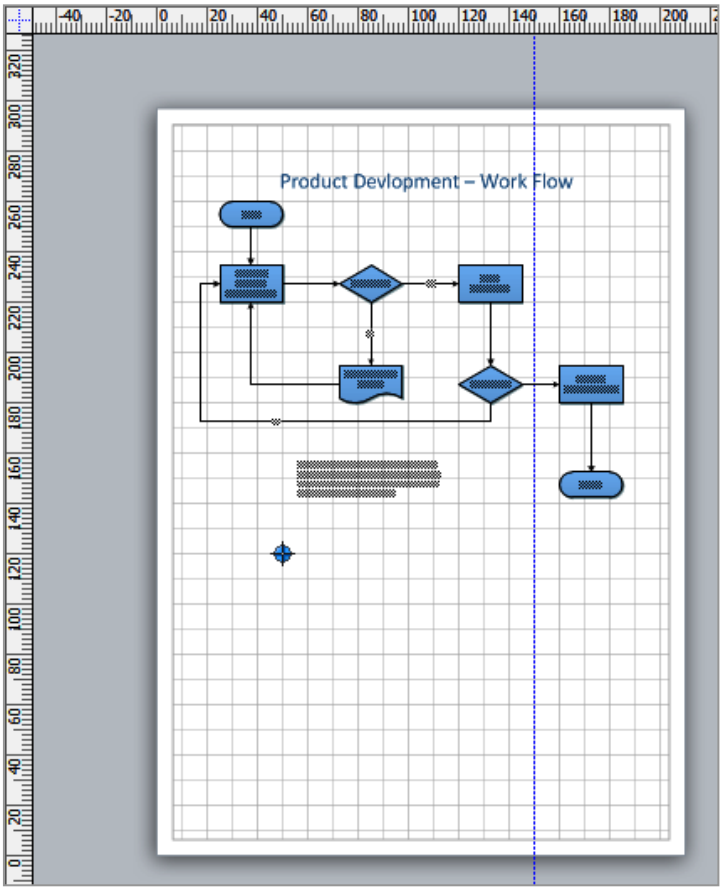


For Your Reference…

To ***add*** a ***guide*** or ***guide point***:

1. Move the mouse pointer to the appropriate ruler (for a guide line) or to the junction of the two rulers (for a guide point)
2. Click and drag to the desired location
3. Release the mouse button

Handy to Know…

- The ***Guides*** option in the ***Show*** group on the ***View*** tab must be ticked to enable you to create guides.
- You can delete a guide or guide point by selecting it and then pressing Del.

USING GUIDES AND GUIDE POINTS

Guides and ***guide points*** can be used for ***aligning*** objects or for the accurate placement of objects. Guide points are particularly useful for aligning objects by their corners or for centring objects on top of each other. You can elect to ***snap*** objects to a guide or guide point, and you can also ***glue*** them so that if you move the guide or guide point, the glued objects will move with it.

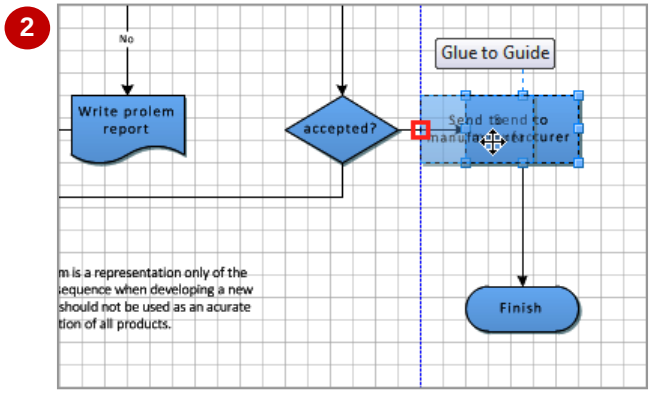
Try This Yourself:

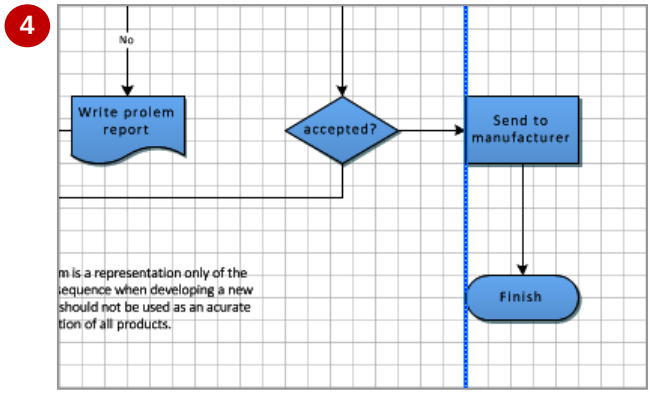
Same File *Continue using the previous file with this exercise, or open V508 Page Tools_6.vsd...*

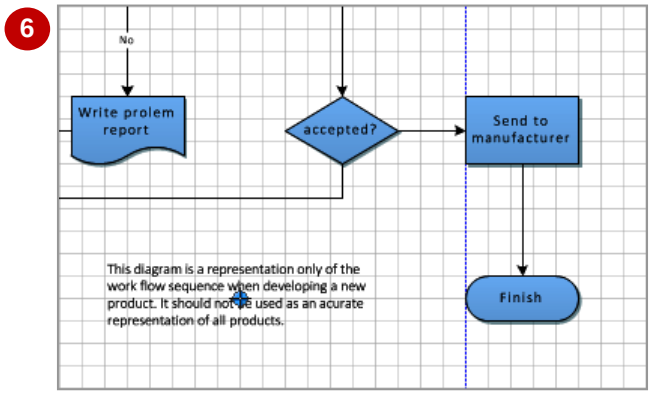
1. Change the ***Zoom*** to ***Page Width***
2. Drag the ***Send to manufacturer*** shape to glue its left edge to the ***150mm*** guide line

   A small red square and a Glue to Guide screentip will appear as you move the shape to indicate that it will be glued to the guide line...
3. Release the mouse, then repeat step ***2*** with the ***Finish*** shape
4. Click once on the ***guide*** to select it, then drag it to the right to reposition it, plus the two glued shapes, at ***160mm***
5. Click and drag the ***This diagram is a representation only...*** text block to align and glue the centre with the guide point, then release the mouse button
6. Click once on the ***guide point*** to select it, then drag it up to reposition it at ***110mm*** (horizontal ruler) and ***150mm*** (vertical ruler)

   As the text block is glued to the guide point, it will also move







For Your Reference…

To ***glue shapes*** to ***guide*** and ***guide points***:

1. Click and drag the shape/object to the guide or guide point until the ***Glue to Guide*** screentip appears
2. Release the mouse button

Handy to Know…

- You can deactivate the ***Glue to Guides*** option if desired. To do this, click on the ***dialog box launcher*** for ***Visual Aids*** on the ***View*** tab and remove the tick from ***Glue*** on the ***General*** tab.

WORKING WITH RULERS

Both rulers in Visio have a ***zero point reference*** which enables Microsoft Visio to measure the distance of shapes from a point of ***origin***. You can change the origin of both rulers and thus the zero points. This may be useful, for instance, when creating floor plans where you want the walls to be the zero point reference and not the edges of the page (as are the default settings).

Try This Yourself:

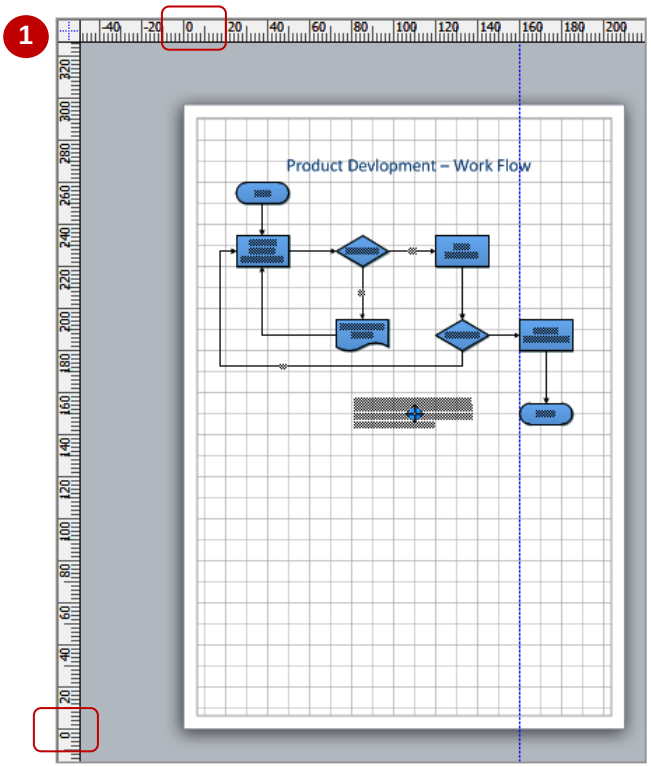
Same File

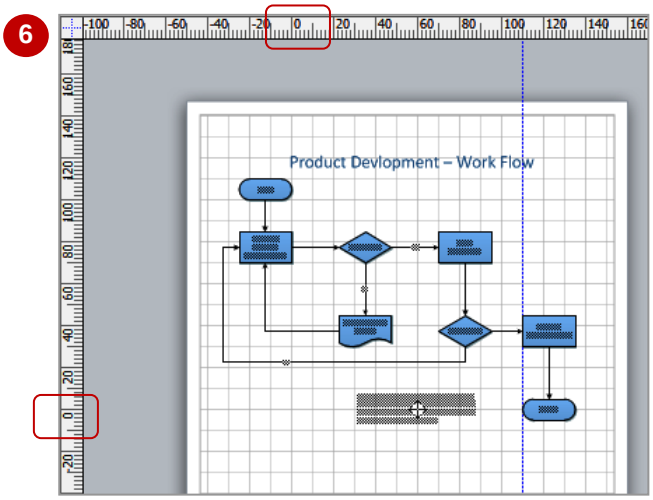
Continue using the previous file with this exercise, or open V508 Page Tools_7.vsd...

1. Change the ***Zoom*** to ***Fit to Window***

   Notice that the zero point references are the top left and bottom left corners of the page...

2. Move the mouse pointer to the vertical ruler until the pointer changes to a double-headed arrow
3. Press Ctrl, then click and drag the mouse to the right to the ***50mm*** mark on the horizontal ruler
4. Release the mouse button, then release Ctrl, to set the horizontal zero point
5. Move the mouse pointer to the horizontal ruler, press Ctrl, then click and drag down to the ***150mm*** mark on the vertical ruler
6. Release the mouse and then Ctrl to set the vertical zero point





For Your Reference…

To ***change*** the ***zero point references*** of a ruler:

1. Move the mouse pointer to the ruler
2. Press Ctrl, then click and drag to the required setting
3. Release the mouse button and then Ctrl

Handy to Know…

- You can reset one zero point by double-clicking on the appropriate ruler.
- You can reset both zero point references simultaneously by double-clicking on the junction of the two rulers (situated in the top left corner of the drawing window).

CHANGING THE SCALE

Visio has a built-in ***scale*** that enables you to create diagrams using specific dimensions. Your drawing scale specifies the way a measurement on the page represents a measurement in the real world. There are four built-in scales from which you can select for a drawing. They are: ***Metric***, ***Architectural***, ***Civil Engineering*** and ***Mechanical Engineering***.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open V508 Page Tools_8.vsd...

1. Right-click on the ***Page-1*** tab, select **Page Setup** and then click on the ***Drawing Scale*** tab to display the ***Drawing Scale*** settings in the ***Page Setup*** dialog box

2. Click on ***Pre-defined scale*** under ***Drawing scale*** to select it

   The scale is now 1:1000 – that is, each millimetre represents 1000 millimetres (or 1 metre). So the A4 drawing page is effectively 210m wide and 297m high...

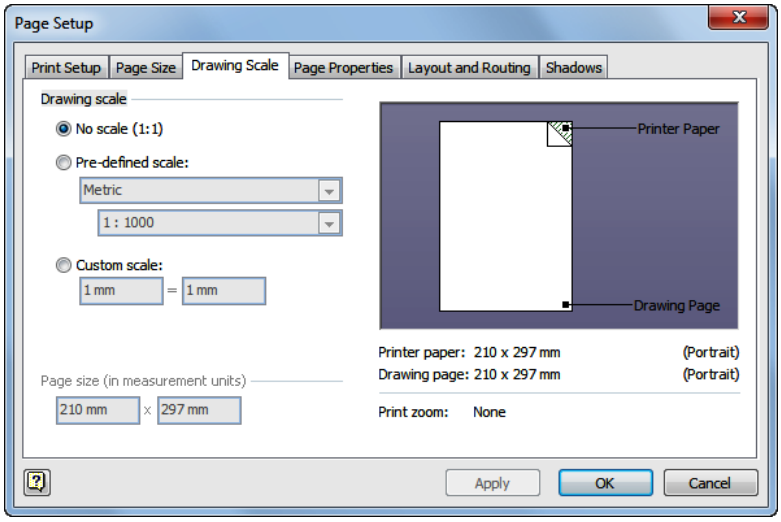
3. Click on the lower drop arrow for ***Pre-defined scale*** and select ***1:200***

   This scale means that 1mm represents 200mm, so the drawing page would be 42m wide and 59.4m high...

4. Click on the higher drop arrow for ***Pre-defined scale*** and select ***Architectural***

   This displays a different form of scale, relevant to the Architectural world...

5. Click on **[Cancel]**



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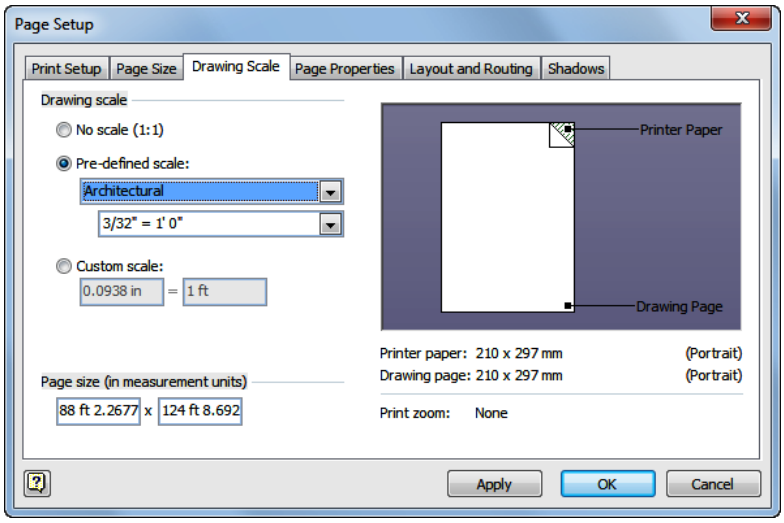

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For Your Reference…

To ***change*** the ***scale*** of a drawing:

1. Right-click on the page tab, select **Page Setup** and then click on the ***Drawing Scale*** tab
2. Set the required options
3. Click on **[OK]**

Handy to Know…

- Drawings such as Flowcharts are unscaled drawings because the space they occupy on the page does not represent a measurement, whereas drawing types such as Office Layouts are scaled drawings. ***Pre-defined scale*** is selected automatically in the ***Page Setup*** dialog box for scaled drawings.