



What is Splash?

Introduction

Splash! is a graphics application that can provide a wide range of users with the tools and resources to carry out drawing, maths, geometry, graph, equations and science activities.

Sample worksheets are provided with the software, which can be edited by teachers and parents, and PDF documents can be imported to use as a background for the student to write their answers on.

Who can use Splash!

The resources, activities and worksheets, can be used across a wide range of educational levels and curriculum areas, from early years to secondary education. Splash! is accessible to users with physical difficulties and has features that will support students with visual difficulties. It is designed to be fully keyboard-controlled for those who cannot use a mouse or its equivalent and it can be fully accessed by students who can not use a keyboard. It can also be accessed by eye-gaze using windows control.

The user profile and user menu

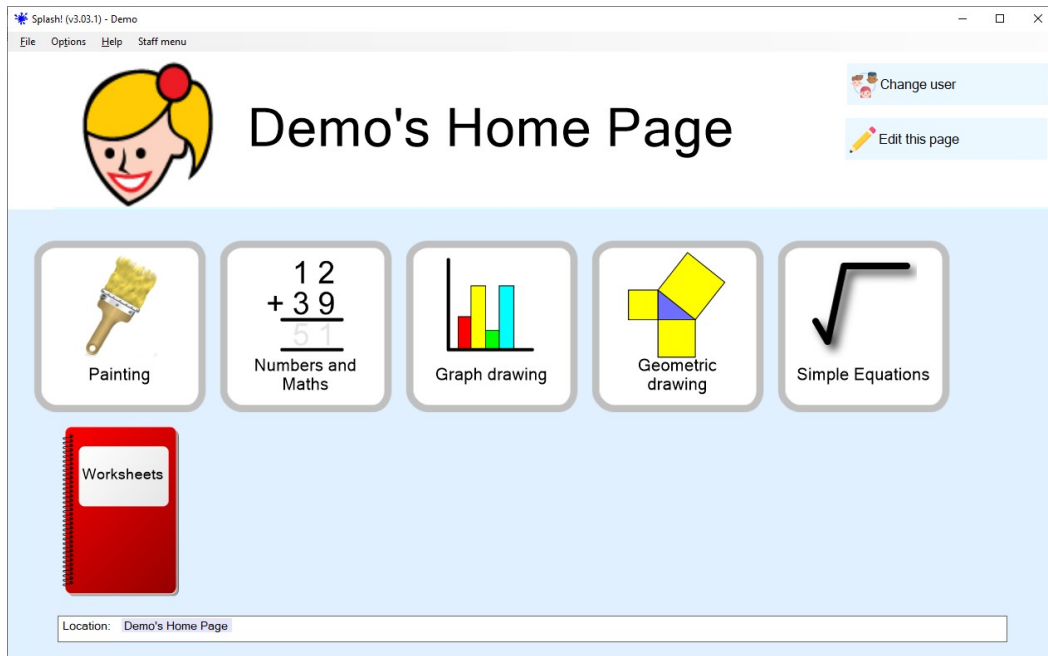
User profiles

Splash can have profiles for multiple users. Each profile can have different settings, especially for accessibility, and their own menu page with different activities on it.

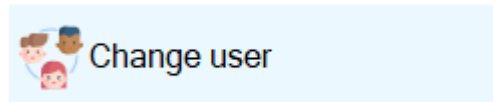
When first installed Splash will create default profiles called "KS1", "KS2", "KS3-5" and "KS3-5 advanced" (depending on the version of Splash). New profiles can be added, or one of these can be renamed for use by your student.

User menu

When you launch Splash! you will see an opening screen with the menu page for the current user:



The main, lower, part of the screen is the content for the user to select from. In the top right the "Change user" button allows:



- Switching between profiles
- Adding, removing and renaming profiles
- Changing user settings (this can also be done from the main work area)

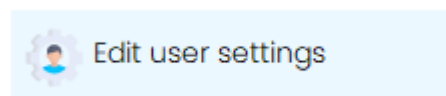
Initial settings

For now we are just going to set up the user's main access method. To set up accessibility settings:

Click on the "Change user" button.

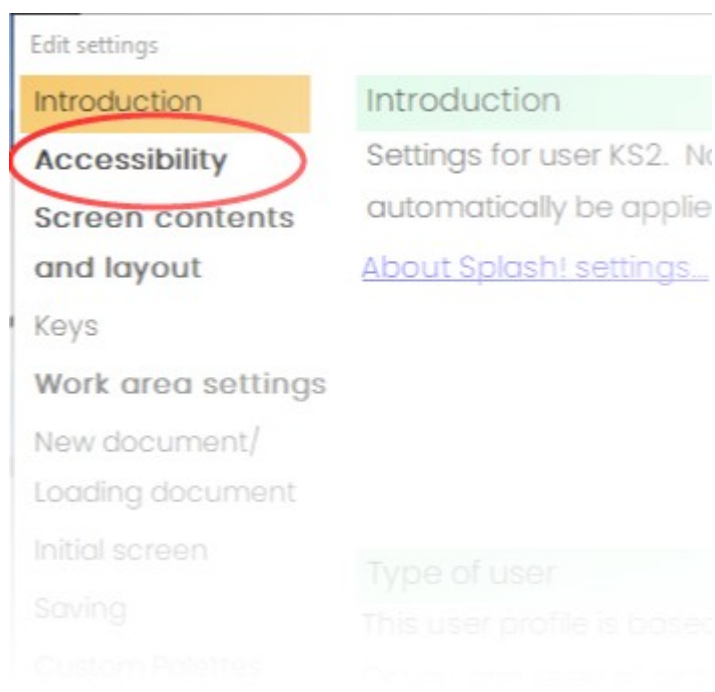
First select the "KS2" user if present, or the "KS3-5" user if you have the Secondary version of Splash.

Then click the "Edit user settings" button.

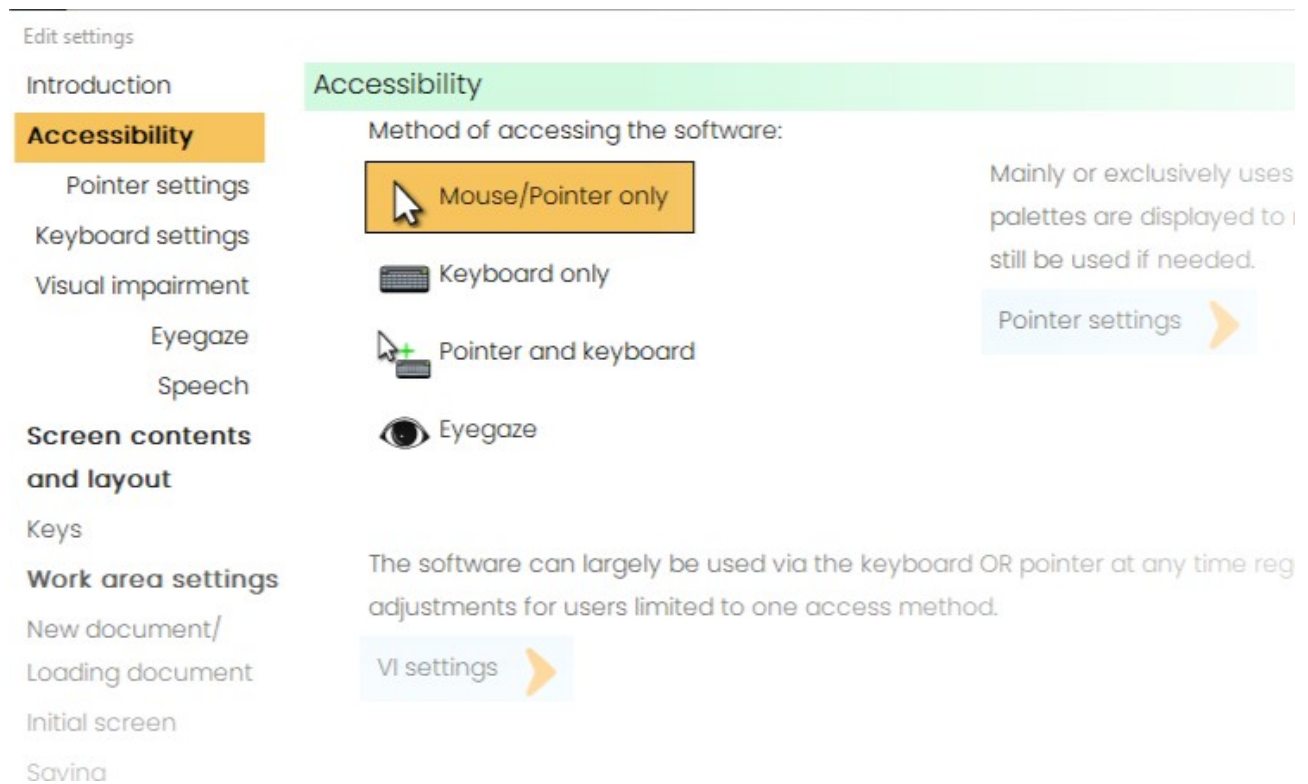


This will open the Edit Settings window

There are several pages of settings, listed down the left hand side of the settings screen. Choose "Accessibility" from this list.



This shows the main accessibility page:



(note that the page list on the left expands to now show some sub-sections within accessibility).

From the list select the main way that the user will access Splash!. Choosing pointer only or keyboard only doesn't disable other access methods, rather adds extra items to perform functions which might more naturally be done by the other means.

If the pupil will benefit from using the on-screen palettes then you should choose the "Mouse/Pointer only" option. Choosing the keyboard option will place keyboard short cuts on the screen next to all the activities, tools and palettes. This reduces the need to remember numerous keyboard short cuts.

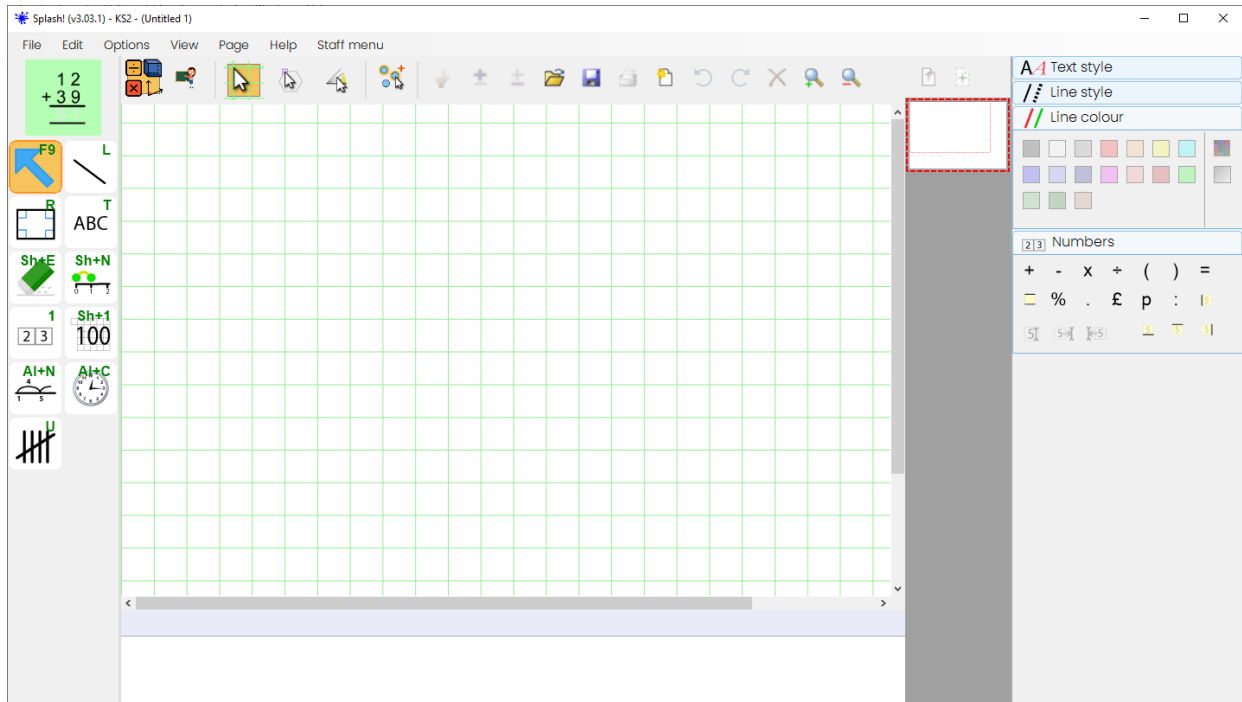
Select "OK" to return to the "User profiles" screen.

Press "Select" to close that screen, switching to the user you selected (if it wasn't already the selected one).

Working in Splash

For now we will explore some of the activity buttons and how the student works in Splash.

Select the "Numbers and Maths" button. ("Maths" in Secondary Splash!) This will open into a work space with the essential tools and palettes for setting out mathematical operations.



This workspace is similar for all Splash work, but will contain different tools and palettes for each activity.

Tools in the Numbers and Maths Activity

Select (F9)			Draw a Line (L)
Draw a Square (S)			Write Text (T)
Rubber (Shift + E)			Number Line Tool (Shift + N)
Number Tool (1)			Number Grid Tool (Shift + 1)
Blank Number Line Tool (Alt + N)			Clock Tool (Alt + C)
Tally Tool (U)			

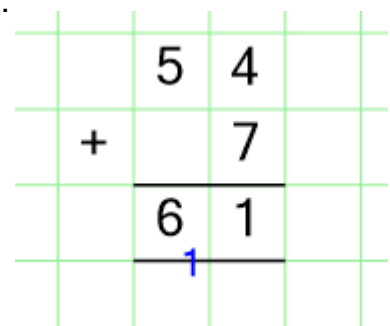
The tools and their keyboard shortcuts in KS2 Numbers and Maths

The Number Tool (1)

Select the Number Tool on the left side of the screen. This can be done either by clicking on it, or pressing the key equivalent ("1").

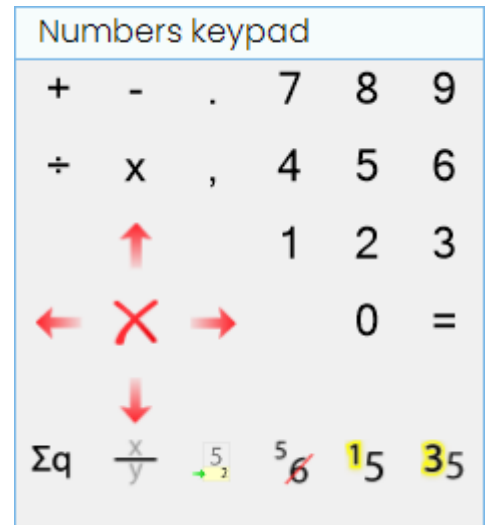


This tool is used to layout basic arithmetic. It always works on a grid.



Keyboard users: use the arrow keys to move the pointer, and press Space to start typing (generally Space is equivalent to clicking). The use the arrows keys to move around, the numbers (and letters) to type as normal. Pressing escape will stop typing, returning the arrow keys to controlling the pointer.

Pointer users: just click on the page to start. For pointer-only users, once using this tool a pop-up palette is displayed which emulates the basic keys needed for arithmetic. For typing general text within Splash you should use an external on-screen keyboard. However for arithmetic this is typically unnecessary and this mini-keypad is better.



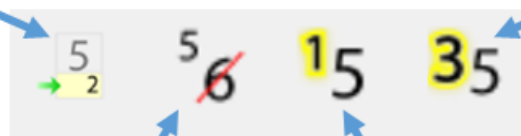
The four buttons bottom right on the number keys pad support users when carrying out addition, subtraction, multiplication and division sums. For keyboard users there are key equivalents.

Add a small number below an existing number
(shortcut = semicolon ;)

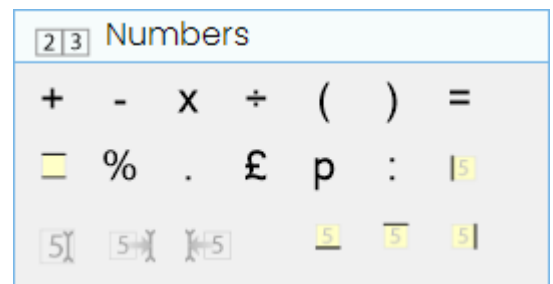
Add any number to the left of an existing number
(shortcut = left square bracket [)

Cross off a number and replace it with a new number
(shortcut = backslash /)

Add the number 1 to the left of an existing number
(keyboard use spacebar)



A second palette, on the right, gives access to some extra symbols and functions



There are also three auto buttons on the number pad that will allow you to input numbers more easily:

Input up to three numbers into the same square

One number per square then the cursor moves one square to the left

One number per square then the cursor moves one square to the right



Important: these, and all other, palettes can be moved to suit the user. Move them by dragging the title with the left mouse button. You can resize them by dragging the very bottom right corner. They can all be docked into columns on the right (or left) of the screen, or can float independently over the screen.

The full functions of the Numbers tool are described in the main manual (there are separate versions of the for pointer and keyboard users)

The Number Line Tool (Shift + N)

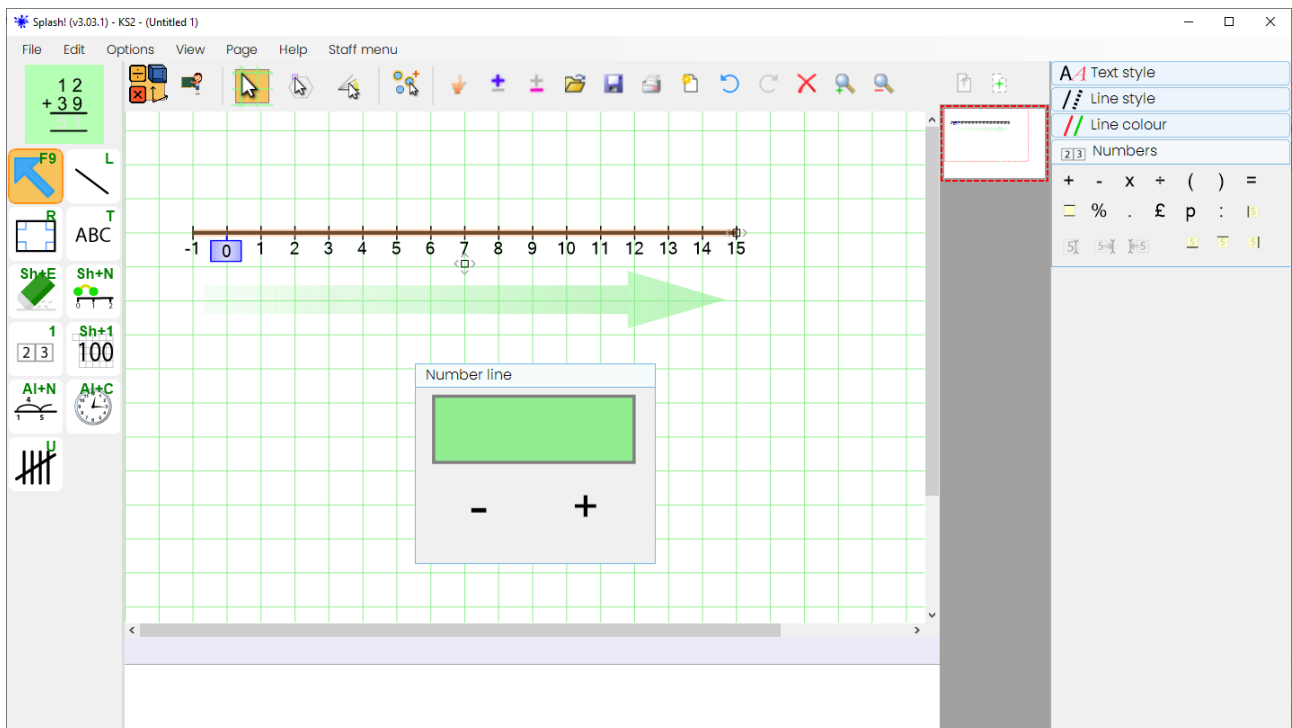


The number line allows you to count on and back to any number including minus numbers.


Select the tool and place the number line onto the workspace.

Keyboard users: press Space to count along the line. Press "+" or "-" to restart from the current location, counting up or down. The initial start point can be changed by typing a number.

Pointer users: a pop-up palette will be displayed with buttons performing these functions. The main, counting, button is green when counting up and red when counting down. You can change the starting number by clicking on a number on the line.



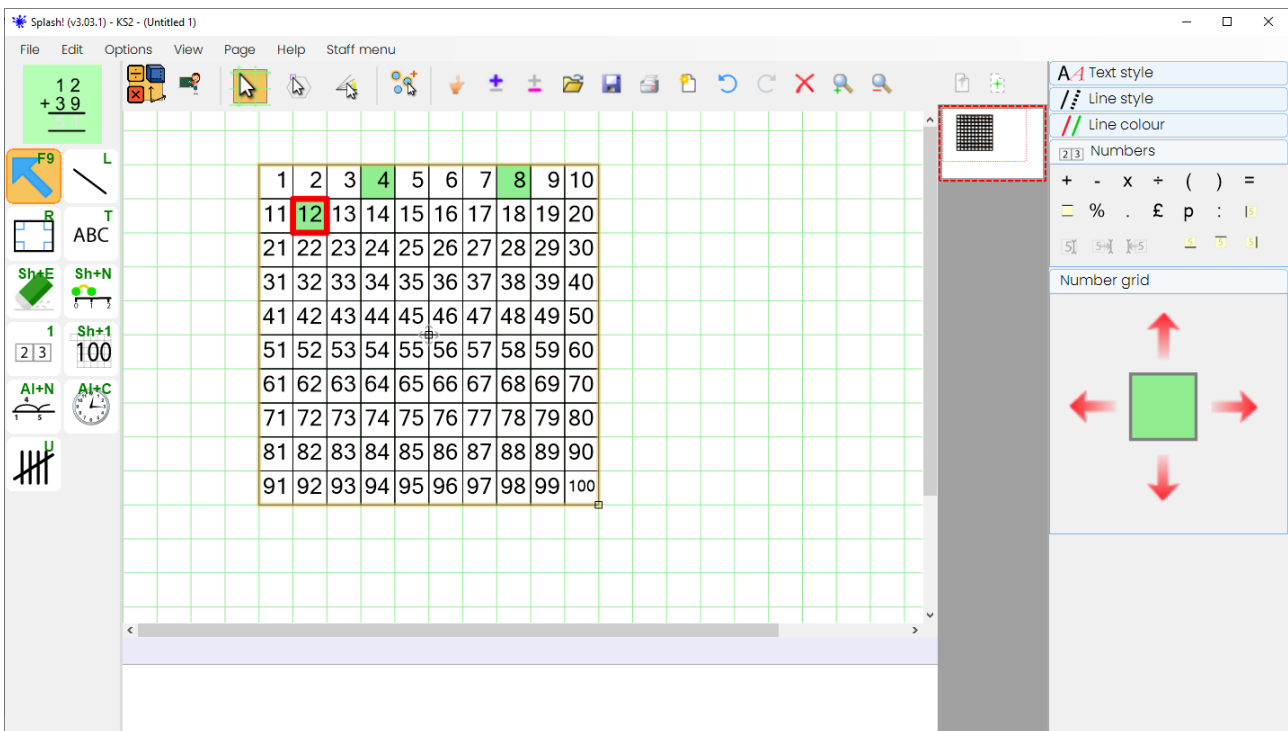
If you select another tool and want to return to the number line you will need to reselect the number line by selecting the F9 tool, then left click onto the number line.

The F9 tool  is a "selection" tool that allows you to reselect something in the workspace

The number line can be personalised to change the start number or the number of jumps.
See Splash Training Handout "Using the Numbers and Maths Activity"

The Number Square Grid (Shift + 1)

Select the number square tool and left click/press space to insert it into the workspace. Left click/press space over a number and a red box will appear around the number.



Pointer users: The "Number grid" palette will appear, with buttons to move and colour squares.

Keyboard users: Use the arrow keys to move, and Space to colour squares.

The number square grid can be modified to create different activities – showing only parts of the grid and allowing the student to make different changes. **See Splash Training Handout "Using the Numbers and Maths Activities"**.

The Blank Number Line



(This tool is not displayed for KS3-5 users in Secondary version)

Select the blank number line tool (Alt + N)

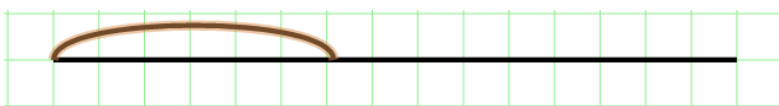
An on-screen palette will appear for mouse/pointer users.

Draw a line across the page and left click when you have finished.

Select this icon from the palette start a new arc or press space for keyboard users.

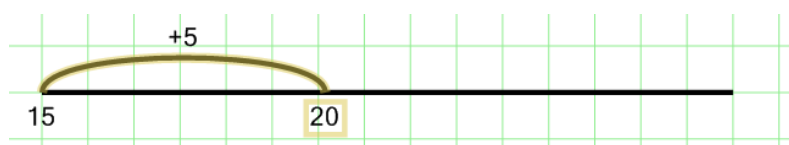


Move the mouse along the line to lengthen the arc and then left click fix it. Keyboard users use the arrow keys to lengthen the line and space bar to fix it.



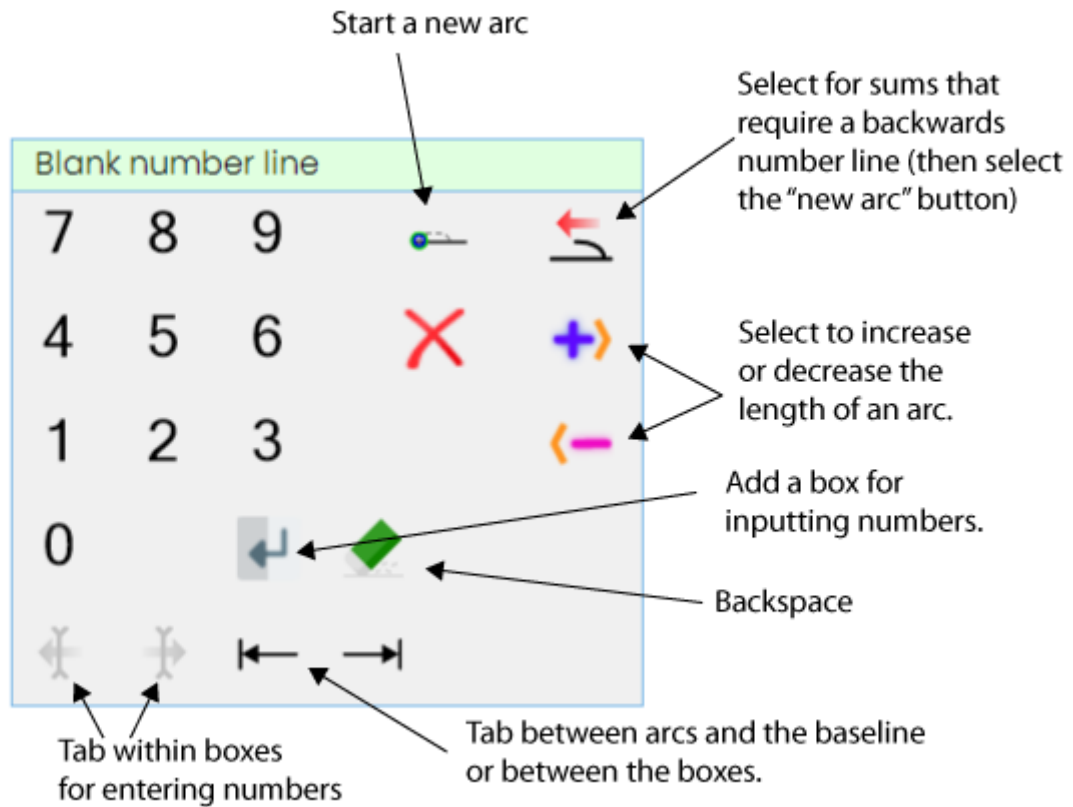
Now press this icon from the palette to place a boxes along the arc to input a number:

Keyboard users press Enter.



When the first arc is finished, select space or  again to start a new arc.

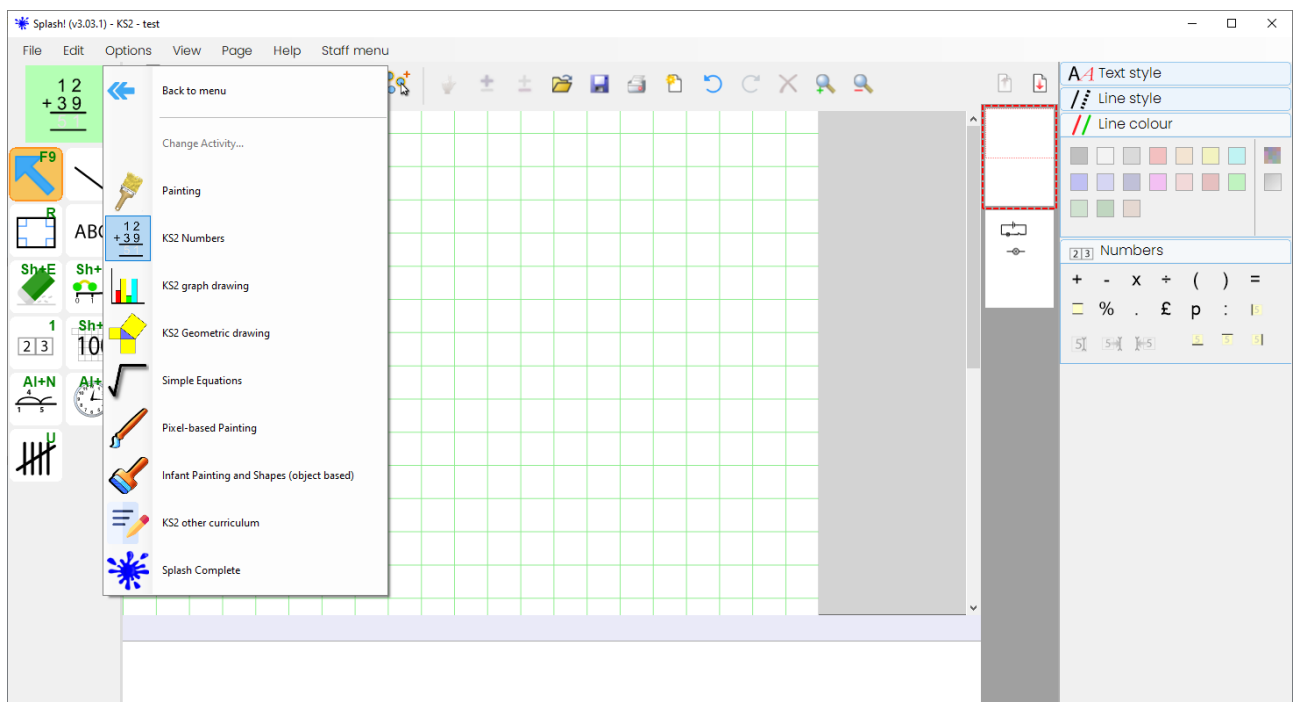
For pointer users this palette is displayed while use the blank number line:



For keyboard users, the arrow keys, tab, "+", "-", Space and Enter perform the various functions.

Changing activities and returning to the menu

To return to the user's menu, select the large green button on the top left, and then the first option in the menu it shows:



Keyboard users: press F12 to open the menu, then use the up and down arrow keys and Enter. The key combination Control + Home can also be used to return to the user's menu page.

Returning to the user's menu will close the current document. If it is not saved you will be prompted whether to save it or not.

You can also switch between the main activities in Splash without leaving the document using this menu: this menu lists the main activities which can be included on the user's menu. It can be useful, for example, to switch between the graph drawing to draw a graph and the arithmetic or equations to then write the details of it, or make a data table matching it.

The Geometric Drawing Activity

There are more than 20 tools available to the user on the Geometric Drawing Activity. There are 12 shape tools, 3 writing tools, 4 transformation tools, 2 measuring tools and a cutting tool.

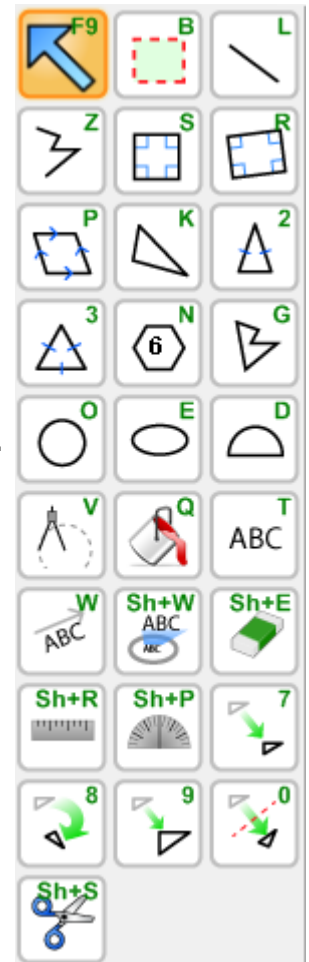
Creating standard and irregular shapes:

Select a drawing tool or use the shortcuts in green (e.g. "S" for square).

For most shapes left-click or use Space to place each point. The details vary between shapes – for example with a circle the first point is the centre, the second is any point on the circle; for a rectangle the first 2 points are two adjacent corners.

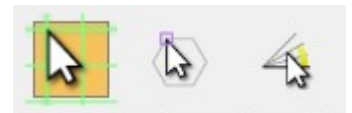
For some shapes with an indefinite number of points (eg the G and Z tools), left-click/Space places points and then double-click or the Enter key is used to place the last point.

Right-click or pressing Escape removes the previous point (if the shape is not yet complete).




Snapping

These three options on the toolbar at the top assist with positioning items on the page. Each enables a different mode for snapping the point the user clicks. The first aligns to the page grid; the second will align with the corners or edges of existing shapes. The third doesn't restrict the position of shapes, but will force angles to be multiples of 15 degrees – making it much easier to draw horizontal or vertical lines, for example. Clicking the selected option again switches it off.



Keyboard users: the key Control key and F5 (off), F6 (grid), F7 (snap-to-shape), F8 (angle) is used to select these.

The page grid can be changed by selecting the “Edit Grid and Background” button at the top of the screen or select from the menu: *Page > Edit Grid and Background*. 

Editing Shapes

Highlight the shape you want to change by selecting the F9 tool and then selecting your shape. Use the fill tool (Q) to colour the shapes and use the palettes on the right to select the colour.

The Transformation Tool (7) will open up two options that will allow you to move or copy your shapes. You can also rotate shapes (8), reflect shapes (0) and re-scale shapes (9).



The Writing Tools (T, W and Sh+W). The “T” tool will input text horizontally, “W” will write text at any angle and “Sh-W” will write text into the centre of a shape.

The Ruler (SH+R) and Protractor (SH+P) can be used to measure the sides of angles of a shape. Select snap to shape to make this more accurate.

The Shape Cutting Tool (SH+S) can be used to cut a shape in half. You can then use the Move Tool to move the two shapes apart. Select “Snap to Shape” if you want to put the shapes back together again.



If you make a mistake use the Rubber Tool (SH+E) to delete shapes or writing.