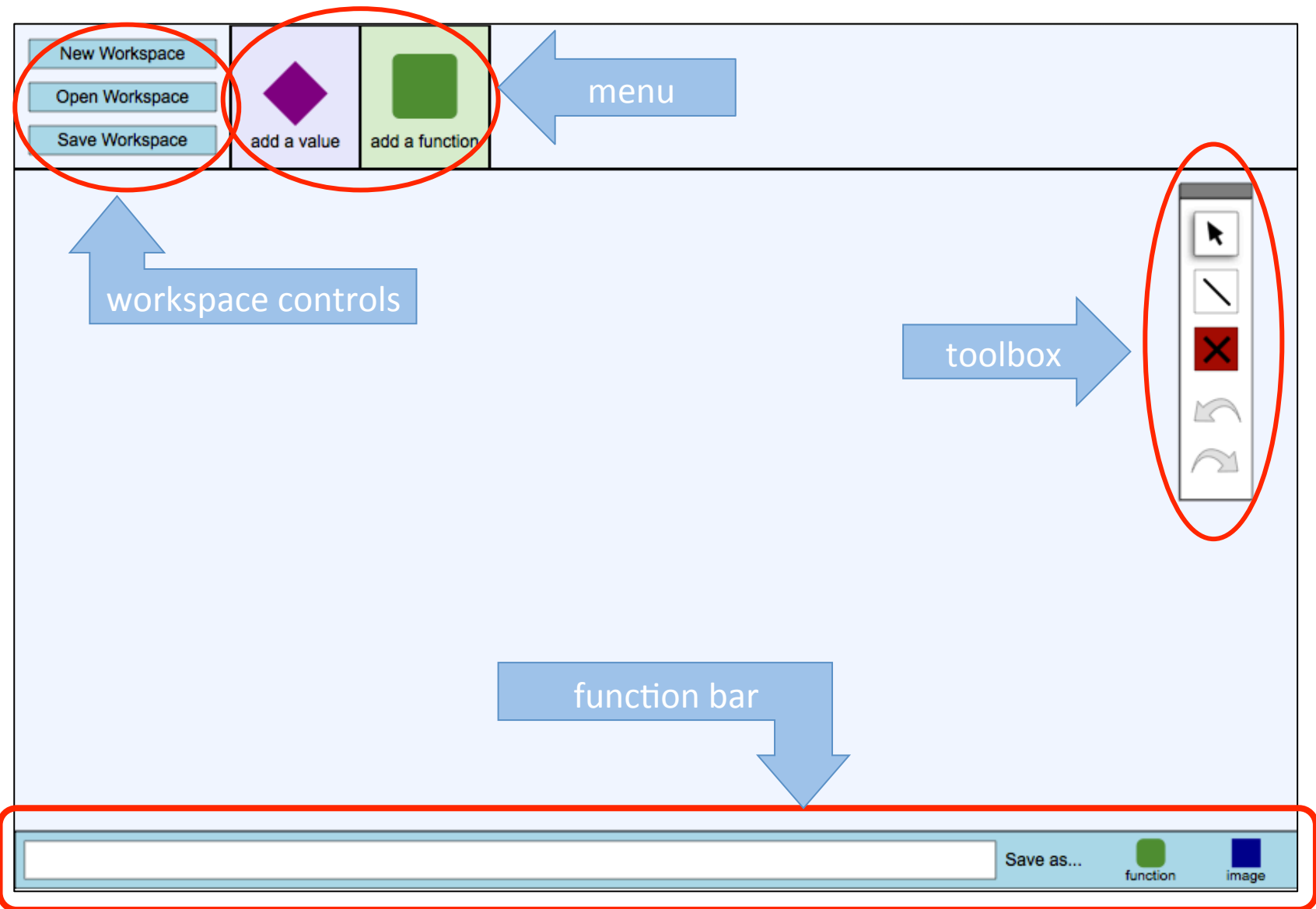
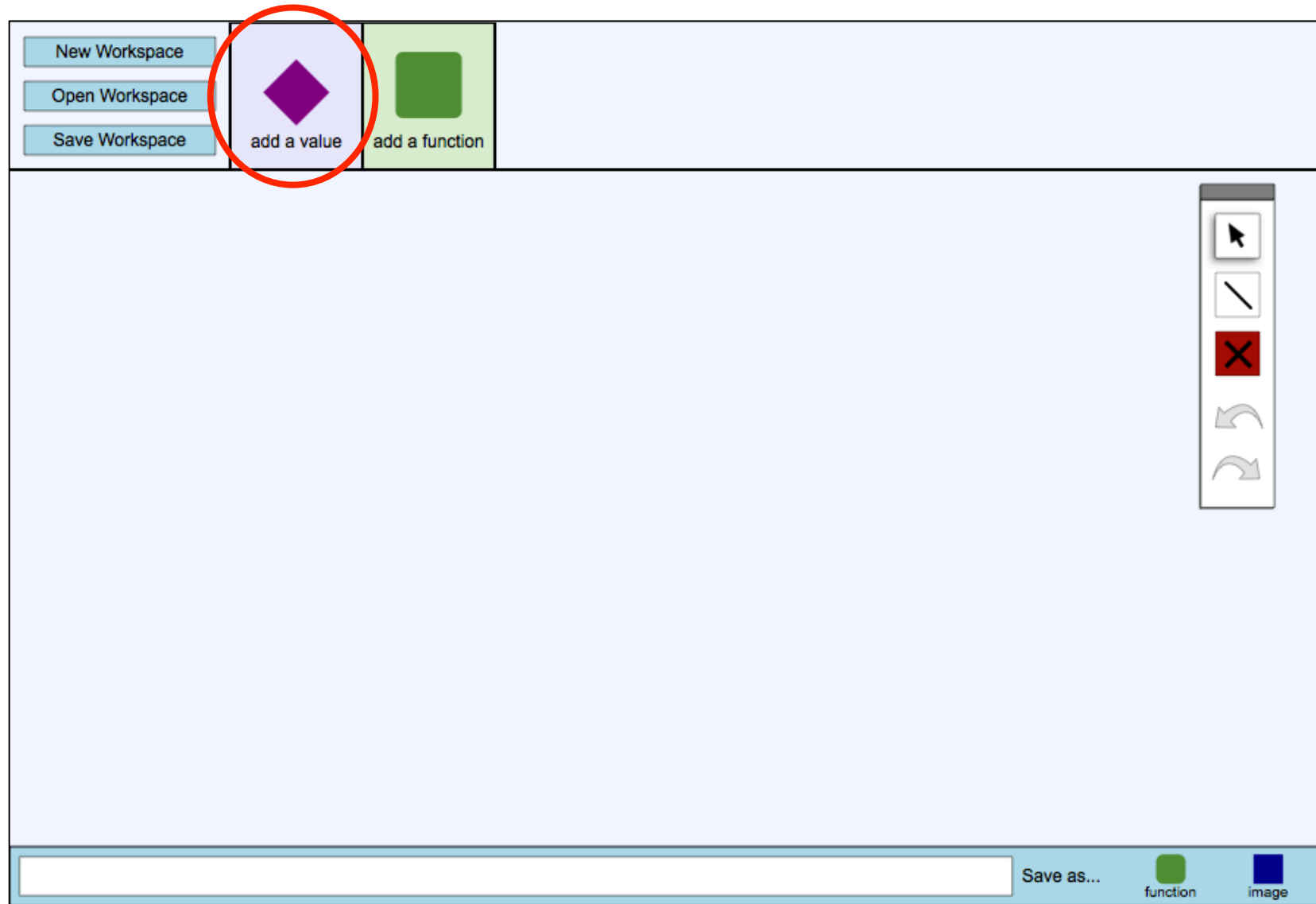


Getting to know the workspace

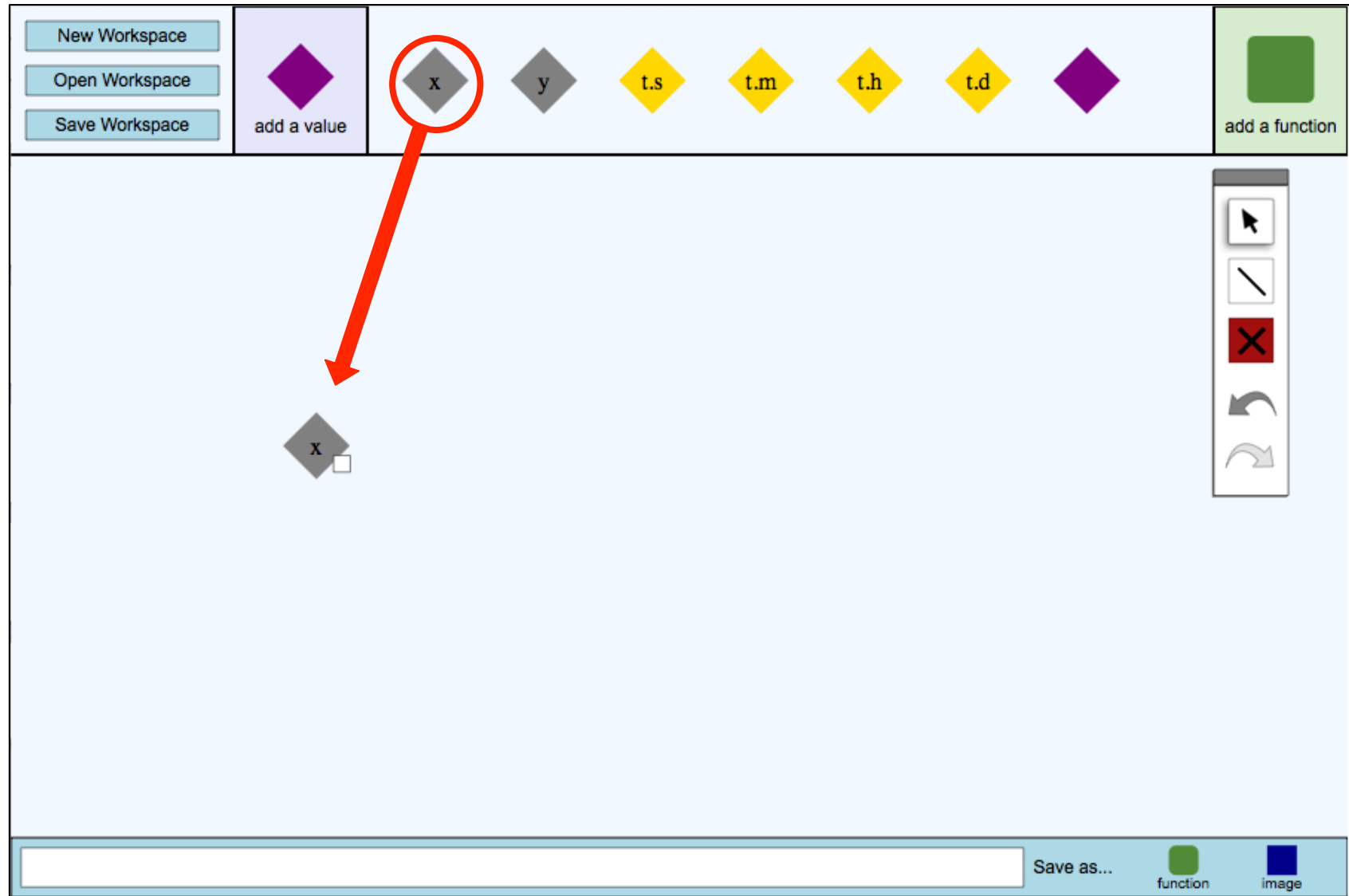


Add and view a value

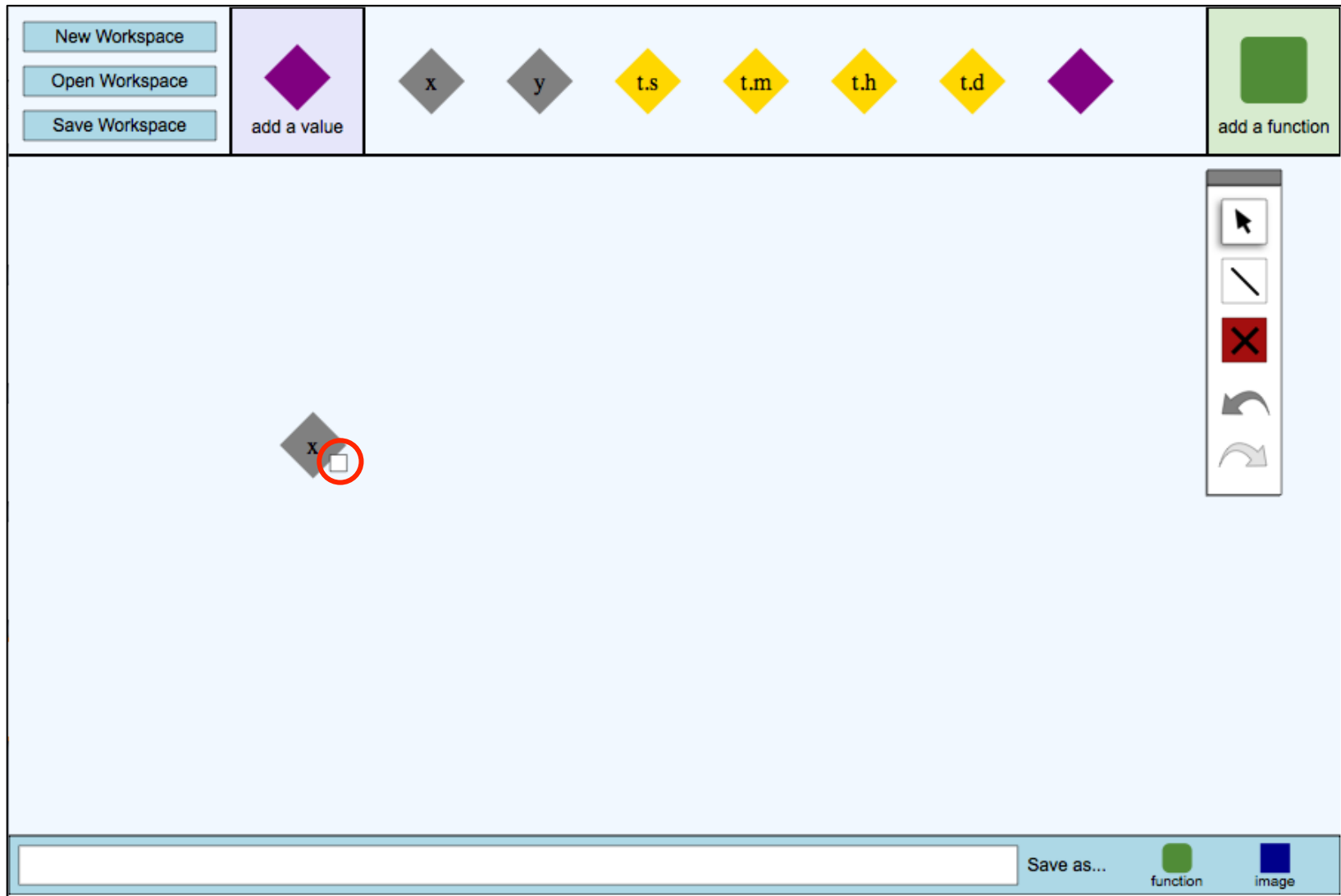
# Click on 'add a value'



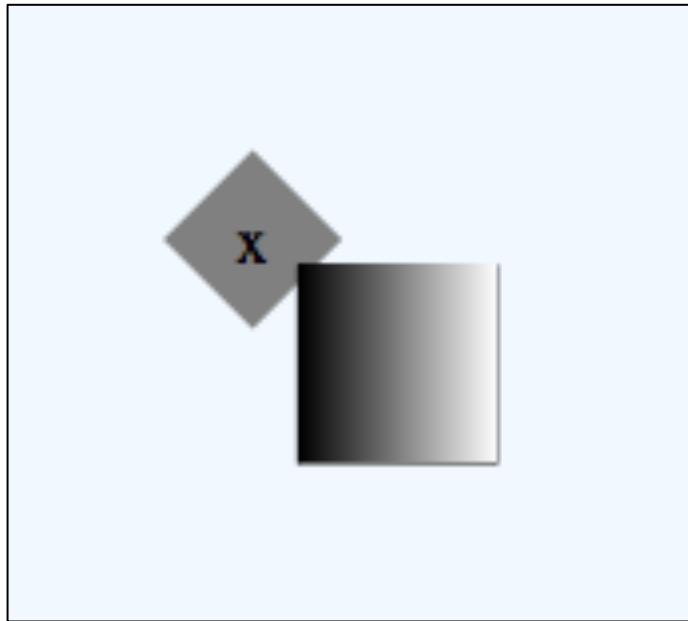
# Click and drag 'x' to workspace



# Click image box on new value



# View the value's image

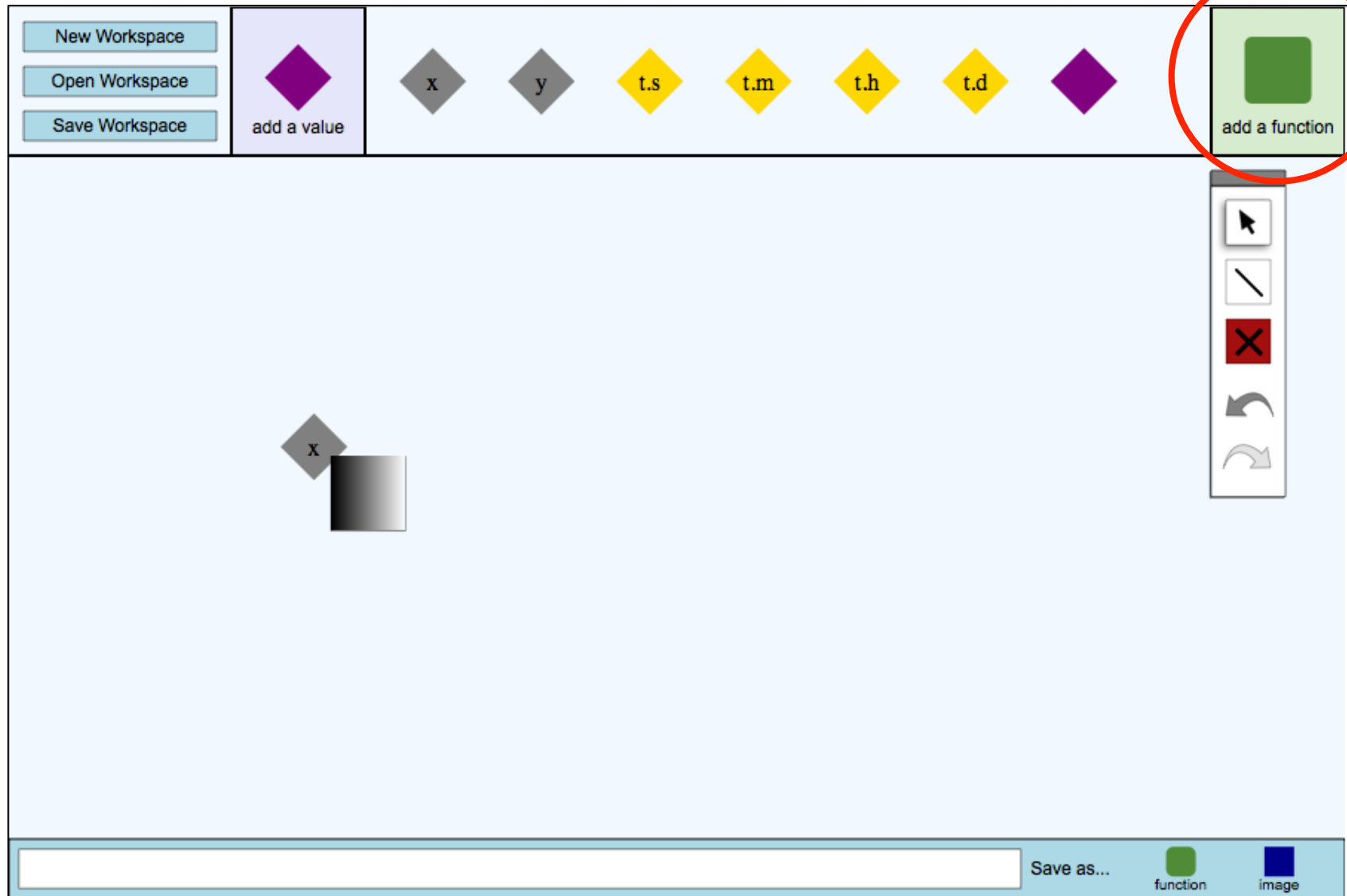


\*To close an open image, re-click anywhere on the image.\*

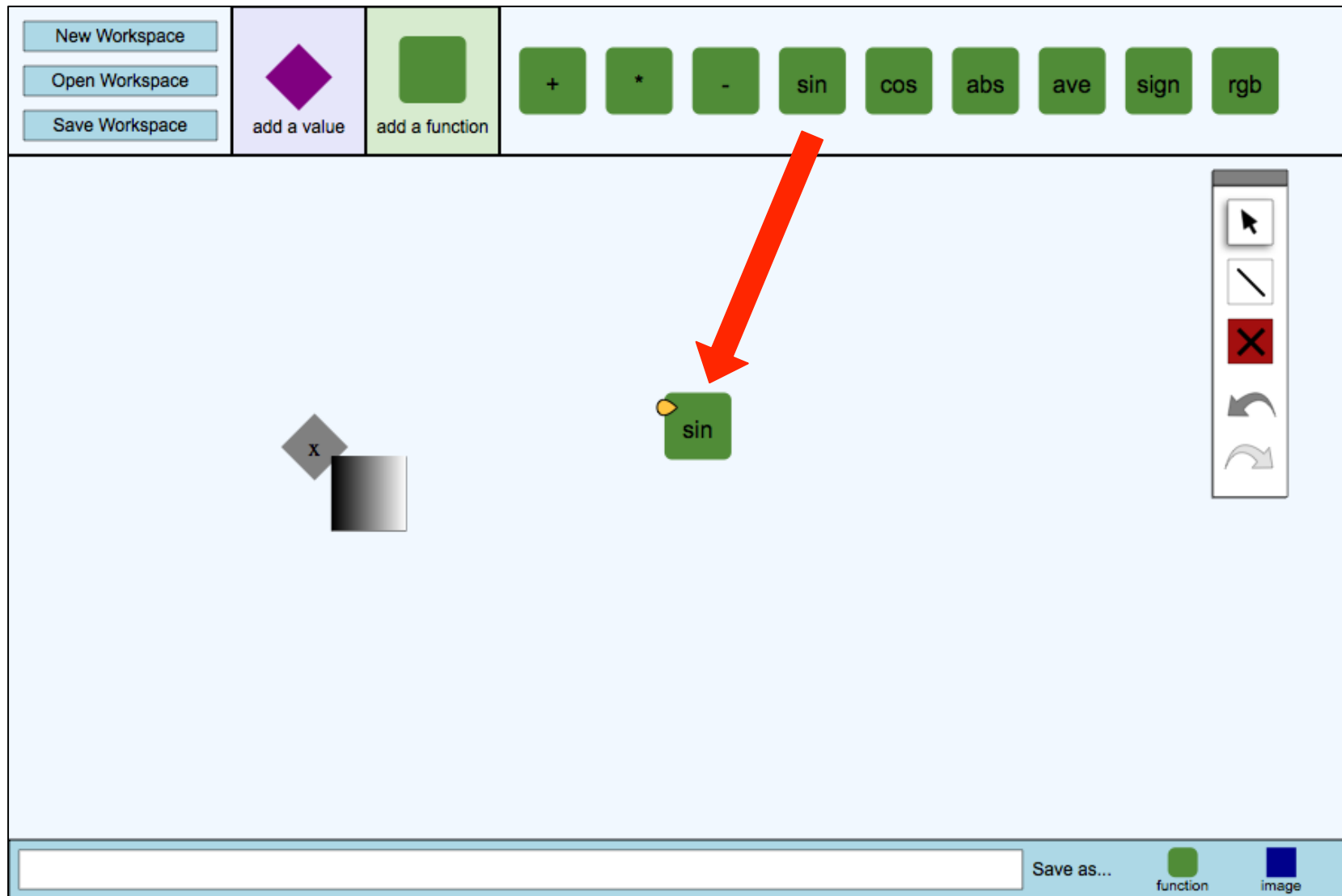
Add a function and connect a value



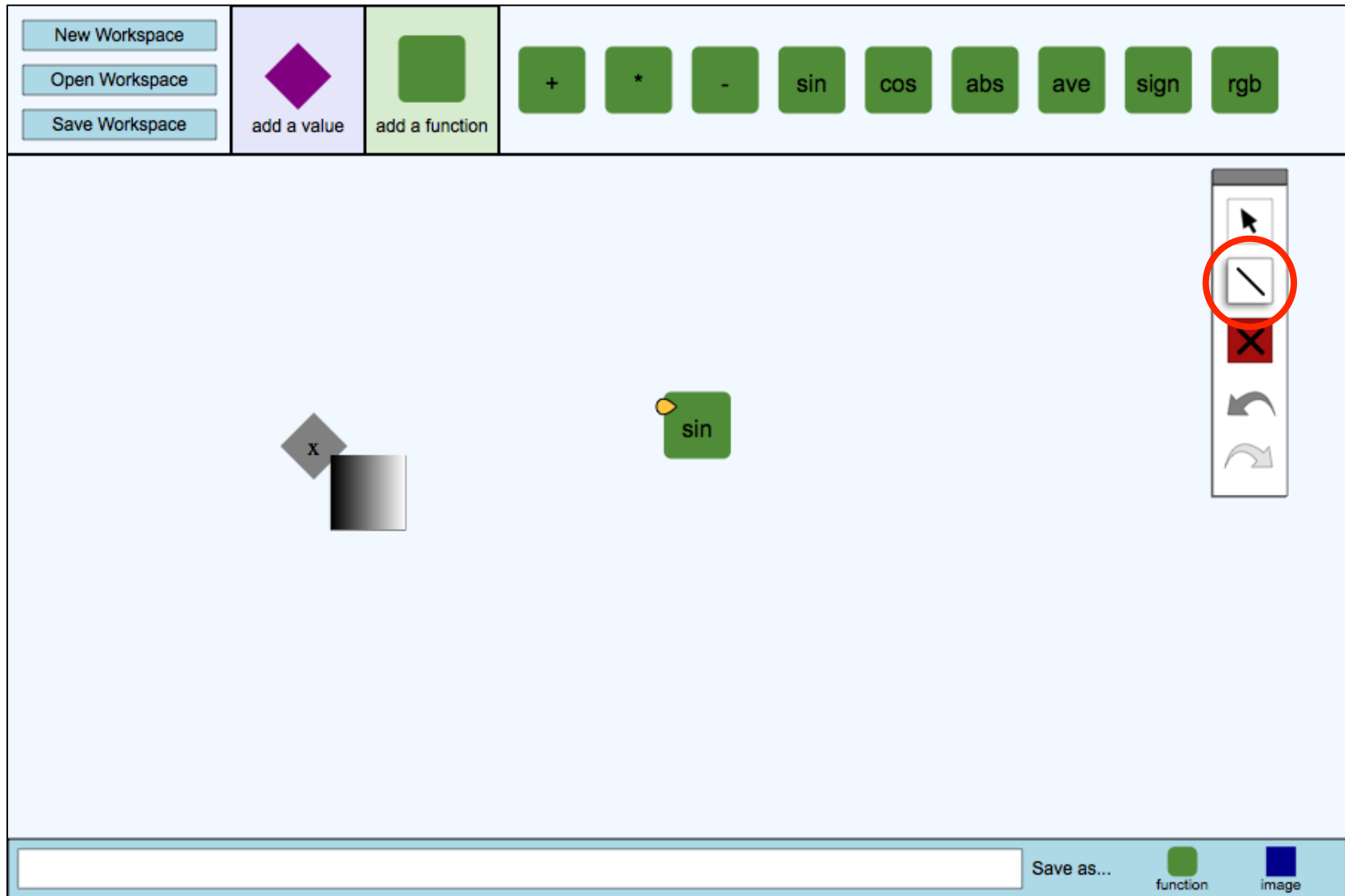
# Click 'add a function'



# Drag 'sin' to the workspace



# Select the line tool



# Click on 'x' to begin making a line

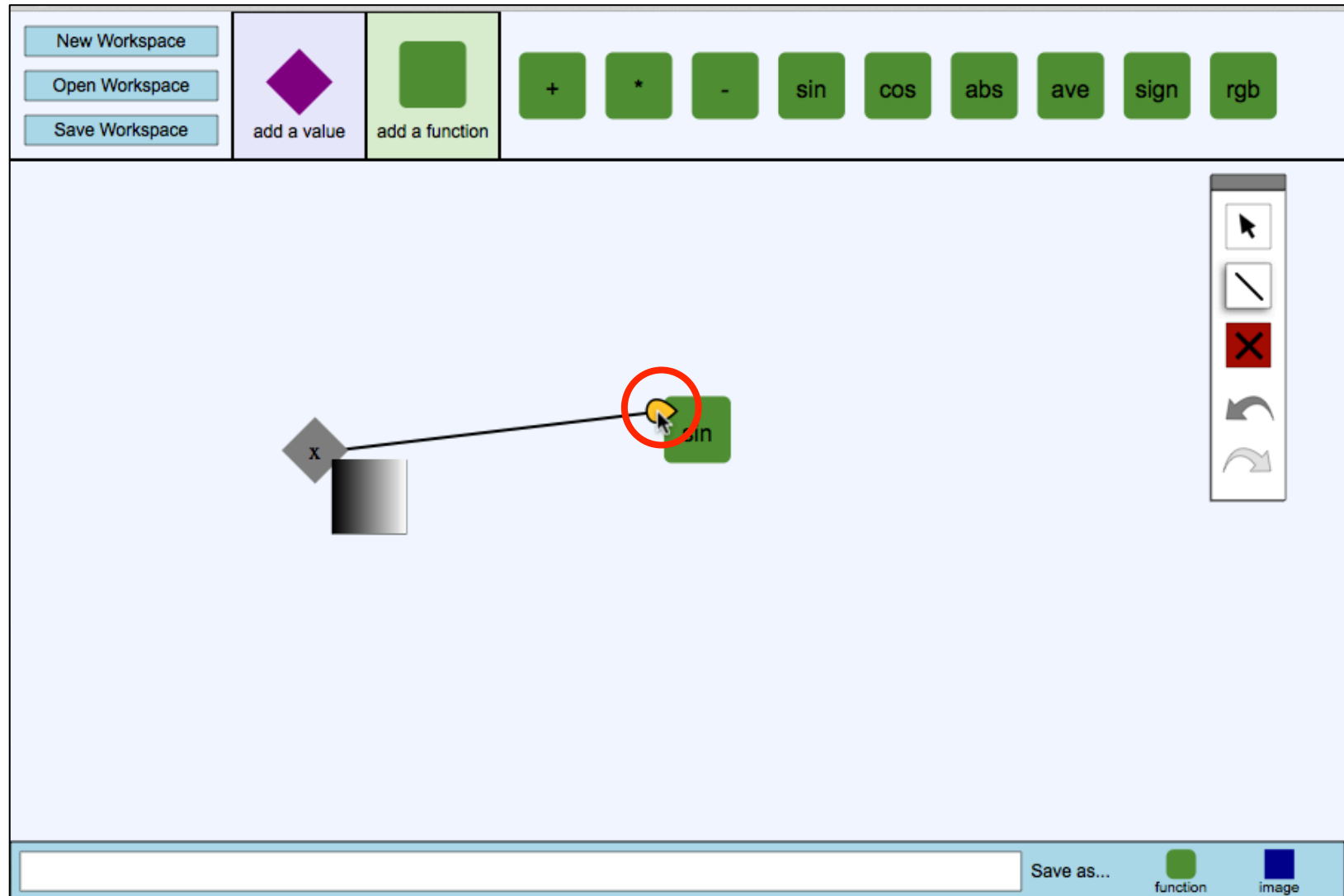
The image shows a visual programming interface with a light blue background. At the top, there is a toolbar with several buttons and a row of function blocks. On the left, three buttons are stacked vertically: "New Workspace", "Open Workspace", and "Save Workspace". Next to them are two colored squares: a purple diamond labeled "add a value" and a green square labeled "add a function". To the right of these are ten green function blocks: "+", "\*", "-", "sin", "cos", "abs", "ave", "sign", and "rgb".

The main workspace contains two objects. On the left, a grey diamond block with the letter "x" inside is circled in red. It is partially overlapping a black rectangular block. To the right of this, there is a green "sin" function block with a small orange circle on its top-left corner.

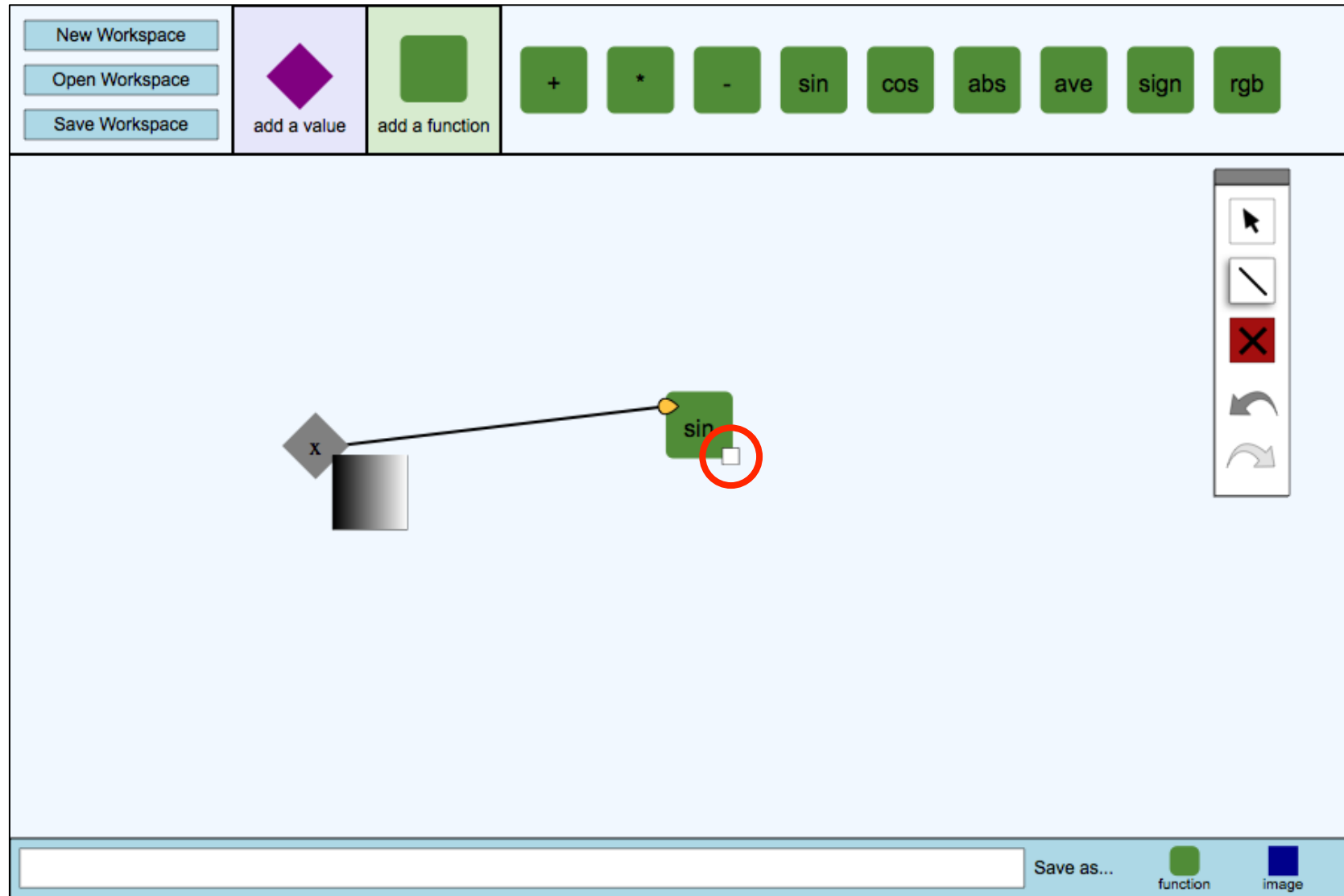
On the right side of the workspace, there is a vertical toolbar with five icons: a mouse cursor, a line segment, a red square with a black "X", a curved arrow pointing left, and a curved arrow pointing right.

At the bottom of the interface, there is a light blue bar containing a text input field on the left, followed by the text "Save as...", and then two small colored squares: a green square labeled "function" and a blue square labeled "image".

# Click on outlet of function to connect



# The resulting image can now be viewed



View function as text

# Select work tool

The image shows a graphical user interface for a block-based programming environment. At the top, there is a toolbar with several sections:

- Workspace management: "New Workspace", "Open Workspace", and "Save Workspace" buttons.
- Value and Function tools: "add a value" (purple diamond icon) and "add a function" (green square icon).
- Mathematical functions: A row of green blocks labeled "+", "\*", "-", "sin", "cos", "abs", "ave", "sign", and "rgb".

The main workspace area contains a diagram with a variable block labeled "x" (a grey diamond) connected by an arrow to a "sin" function block (a green square). Below the "x" block is a grey rectangular block.

On the right side of the workspace, there is a vertical toolbar with icons for selection (a mouse cursor, highlighted with a red circle), deletion (a diagonal line), undo (a red "X"), redo (a curved arrow), and another redo (a curved arrow).

At the bottom, there is a status bar with a "Save as..." button and two icons labeled "function" (green square) and "image" (blue square).



# Click function to select and view text

The image shows a visual programming environment with the following components:

- Top Panel:**
  - Buttons: New Workspace, Open Workspace, Save Workspace.
  - add a value (purple diamond icon).
  - add a function (green square icon).
  - Function palette: +, \*, -, sin, cos, abs, ave, sign, rgb.
- Workspace:**
  - A variable block labeled 'x' (grey diamond) is connected to a 'sin' function block (green square).
  - The 'sin' block is highlighted with a red circle.
  - A red arrow points from the bottom left towards the output text.
- Right Panel:**
  - Tools: selection tool (arrow), line tool, delete tool (red X), undo, redo.
- Bottom Panel:**
  - Output text: `sin(x)`.
  - Buttons: Save as..., function (green square), image (blue square).

Connect branching elements

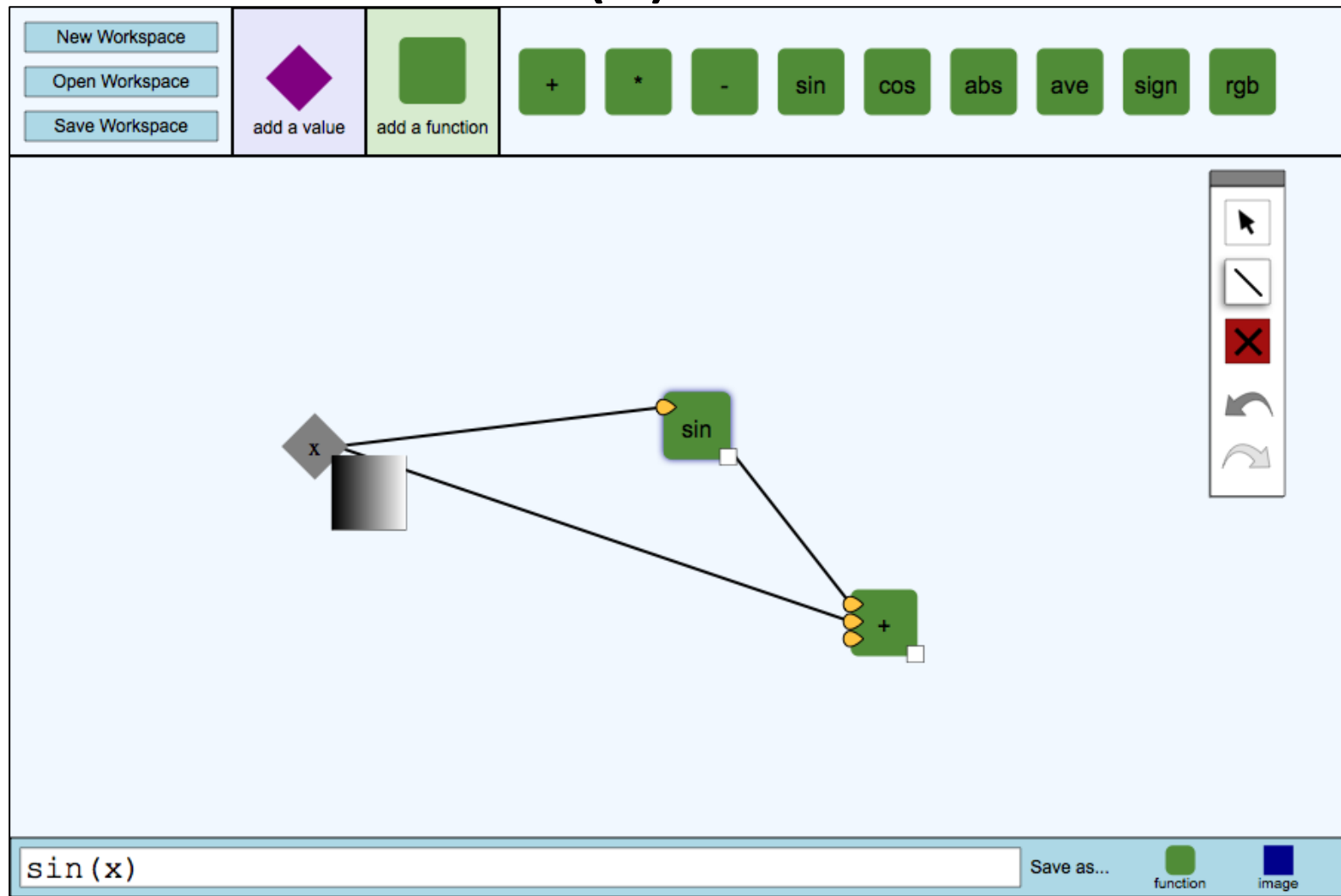
# Add '+' function to the workspace

The screenshot displays a block-based programming environment. At the top, a toolbar contains three buttons: 'New Workspace', 'Open Workspace', and 'Save Workspace'. To the right of these are two colored squares: a purple diamond labeled 'add a value' and a green square labeled 'add a function'. Further right is a row of function blocks: '+', '\*', '-', 'sin', 'cos', 'abs', 'ave', 'sign', and 'rgb'. A red arrow points from the '+' block in this row to the workspace area below.

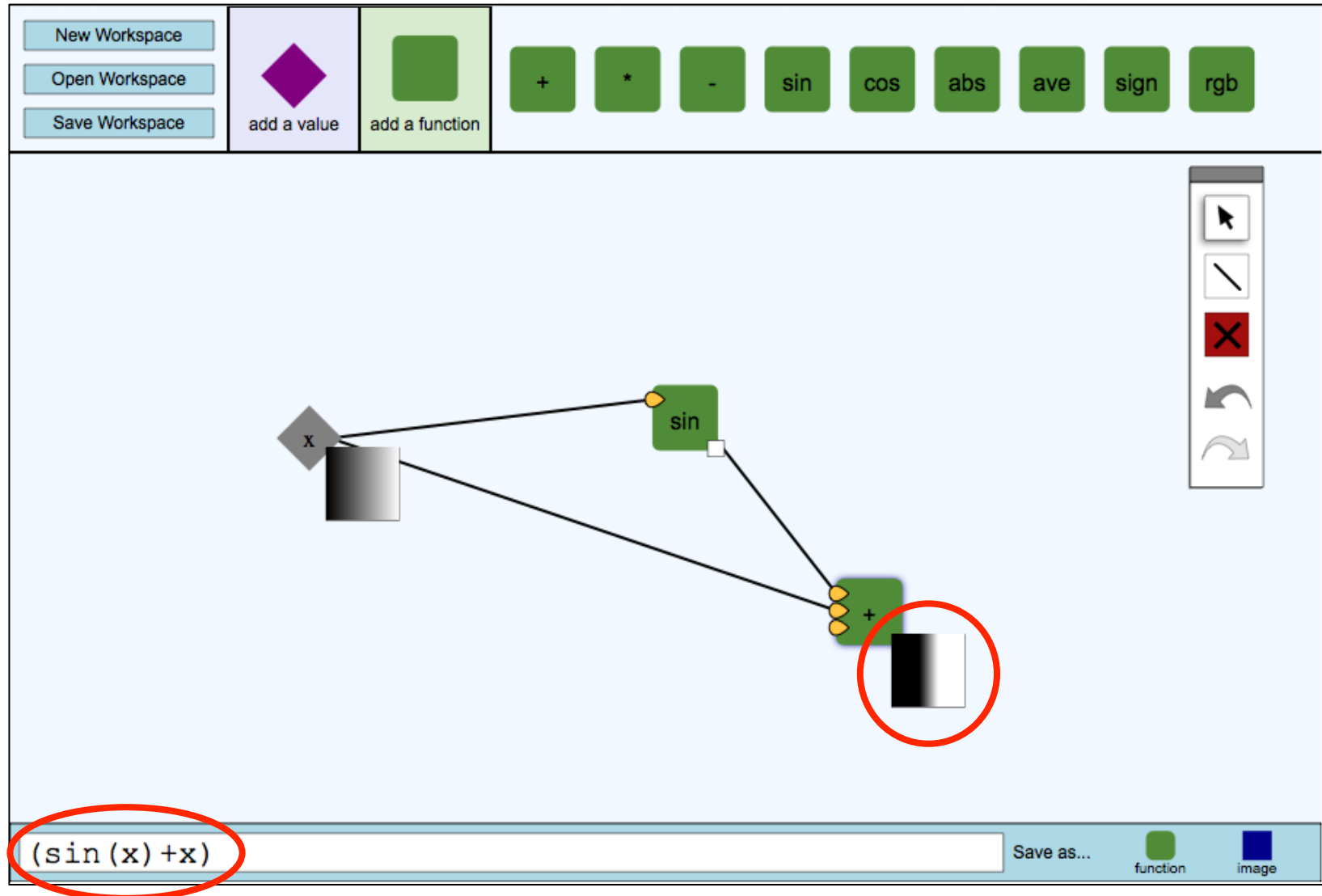
The workspace area is a large light blue rectangle. It contains a variable block labeled 'x' (a grey diamond) connected by a line to a 'sin' function block (a green rectangle). Below the 'sin' block is a '+' function block (a green rectangle). On the right side of the workspace, there is a vertical toolbar with icons for selection (mouse cursor), deletion (red X), undo (curved arrow), and redo (curved arrow).

At the bottom of the interface, there is a text input field containing the text 'sin(x)'. To the right of the input field is a 'Save as...' button. Further right are two small colored squares: a green square labeled 'function' and a blue square labeled 'image'.

# Select line tool and connect 'x' and 'sin(x)' to '+'



# You can now view the resulting image and text

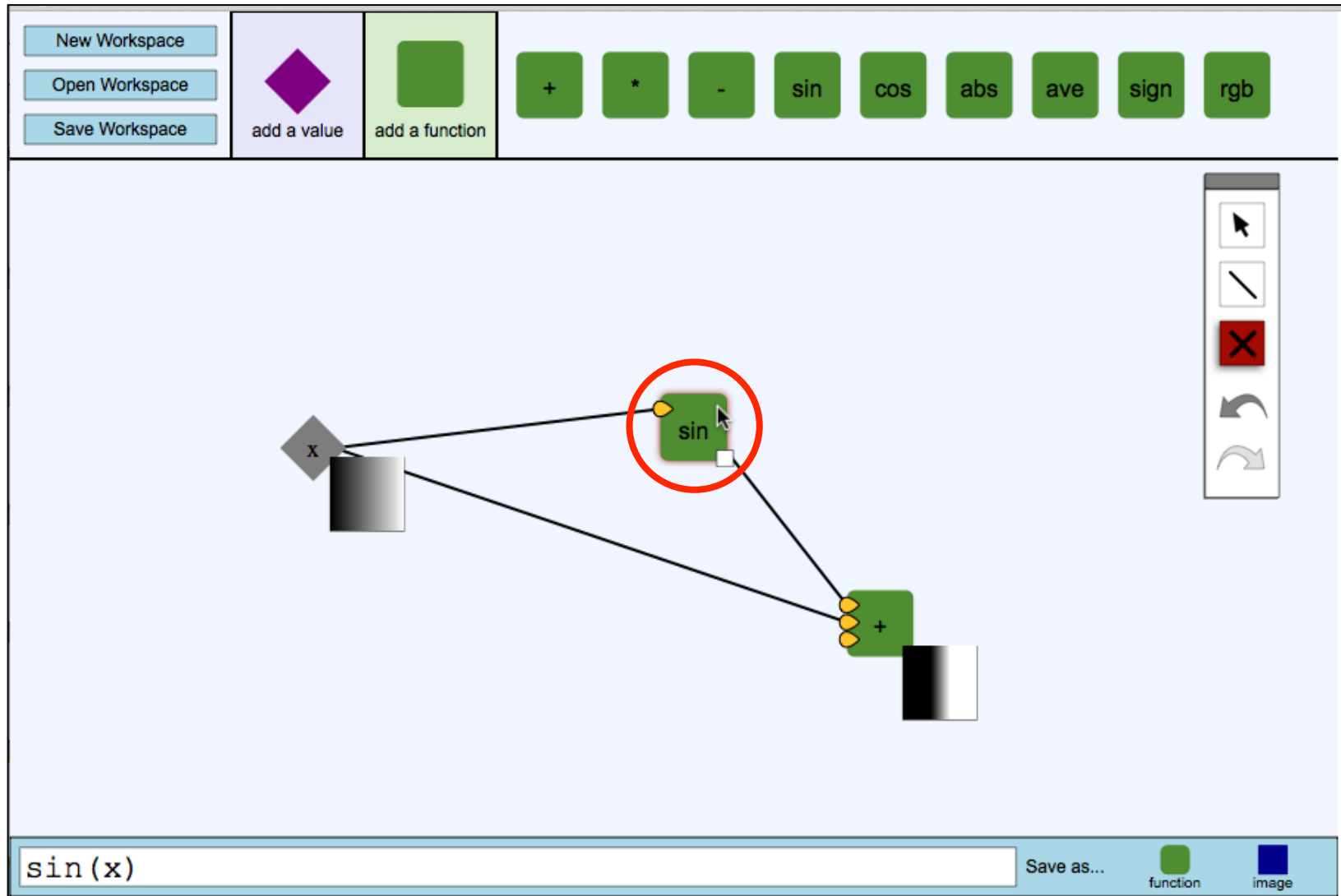


Delete objects and undo actions

# Select delete tool

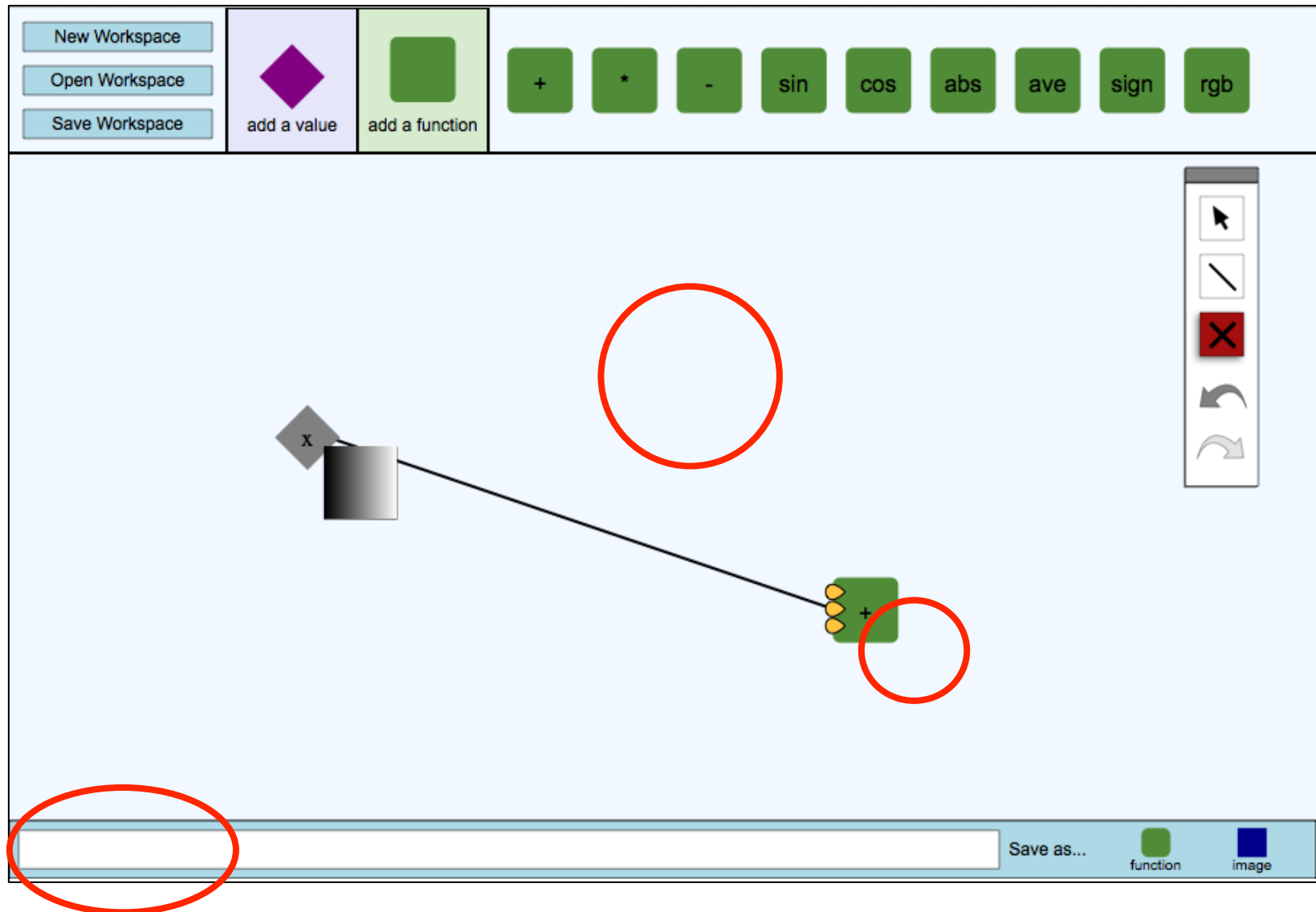
The image shows a visual programming environment. At the top, there is a toolbar with several buttons: "New Workspace", "Open Workspace", and "Save Workspace" on the left; "add a value" (purple diamond icon) and "add a function" (green square icon) in the middle; and a row of mathematical and image processing functions: "+", "\*", "-", "sin", "cos", "abs", "ave", "sign", and "rgb" on the right. The main workspace contains a graph with three nodes: a variable node "x" (grey diamond), a "sin" function node (green square), and an addition node "+" (green square). The "x" node is connected to both the "sin" node and the "+" node. The "sin" node is also connected to the "+" node. The "+" node is connected to an output image node (black and white gradient rectangle). On the right side of the workspace, there is a vertical toolbar with five icons: a selection tool (black arrow), a deletion tool (red square with a black 'X'), a undo tool (grey curved arrow), and a redo tool (grey curved arrow). The deletion tool is highlighted with a red circle. At the bottom, there is a text input field containing the expression  $(\sin(x) + x)$ , a "Save as..." button, and two icons labeled "function" (green square) and "image" (blue square).

# Click on the 'sin' function to delete





# Observe the updated workspace



# Undo workspace change by clicking the 'undo' button



\*Changes undone, can be redone with the 'redo' button below the 'undo' button.\*

# Objects and connections are re-made

