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Activity in which the user has to copy a drawing in a grid, create a symmetric drawing or make another drawing by rotating it certain degrees:



Let's play with shapes. Click on the shapes below and try to draw this boat.

In the tab "Activity" we can find:



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## AREA 1:

Double-click on the table and you will see the grid used to create the drawing to be repeated:

In the 10 x 10 (1) grid you will see the 100 squares that you can "paint". The first thing we will do is to select the colour we are going to use for painting by clicking on the button number 8; once chosen, the active colour will already be displayed in the square number 9. Then we will pick the shape for our "brush": the button number 2 will be used to paint the whole square, and the buttons 3, 4, 5 and 6 will be used to paint only half of the square in the corresponding triangular area. This shape will also be displayed in the square number 9. We will then use shapes and colours to sketch our drawing, and if at any time we make a mistake we can always

click on the button number 7; at that moment in the square number 9, a white square with a cross will be displayed and we will then be able to click on one of the squares in the grid to clear its contents.

When we finish and click on the green confirmation button, the drawing will be displayed on the main screen in the left grid and in the second grid we will see a copy of it.

## Interactive activity – Symmetries, translations and rotations

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## AREA 2:

In the box "Options:" (1) we will indicate if the user will have to create the symmetric figure, if he will have to duplicate it, or if he will have to recreate it by rotating it a certain amount of degrees. In the latter case the list (2) will be displayed to choose a 90°, 180° or 270° rotation. By clicking on each of these three radio buttons, the exact shape to be copied by the user will be displayed in the grid on your right.



In the field number 3, we can determine the size of the small squares making up the grid, so we should bear in mind that an increase in this field of "X" pixels will generate an increase of "10X" pixels on the sides of the grid. These buttons (4) are used to choose if we want to round the corners of the activity squares (except those of the grid). Finally, by activating the box (5) we will ensure that the grid lines on the solid areas can be seen in the model (easier to solve).