

How children can draw with computers

ilustritas

**Recommended
for creative kids!**

*** from 7 years upwards ***

Carlos Alberto Rodríguez Behning

How children can draw with computers

ilustritas

**Recommended
for creative kids!**

by Carlos Alberto Rodríguez Behning

a iRodBeh! production

**There are many books that teach
adults how to draw with their computer,
but what about for children?**

**ilustritas is a series of exercises
to teach kids how to draw with
their computer.**

Each exercise in ilustritas shows you new tools.

The exercises have been tested with children of different ages. Some children did the exercises at home and others participated in groups, with their teachers. The exercises in ilustritas teach kids how to draw and promote creativity in children.

In the ilustritas exercises, the Inkscape programme is used.

This is an Open Source software, has all of the important tools, is easy to use and is completely free.

Link to the official Inkscape site:
www.inkscape.org



**Come on!
It's time
to work!!**

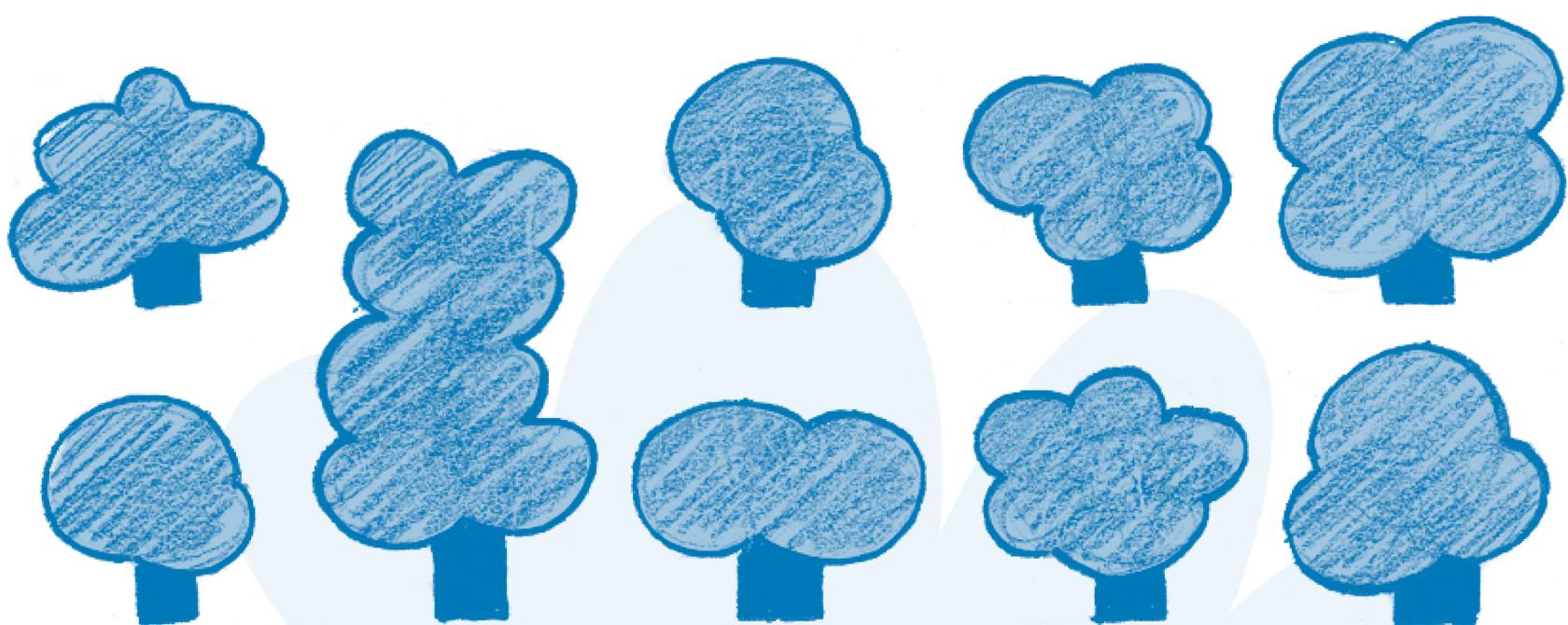
1

Are trees always green?

To draw these trees you just need to know how to draw two things: circles and squares! In this exercise we are going to create some trees and we are also going to colour objects and put them in front or behind others.

Don't worry if they don't come out the same. Try to learn how to use the tools and, draw your tree!

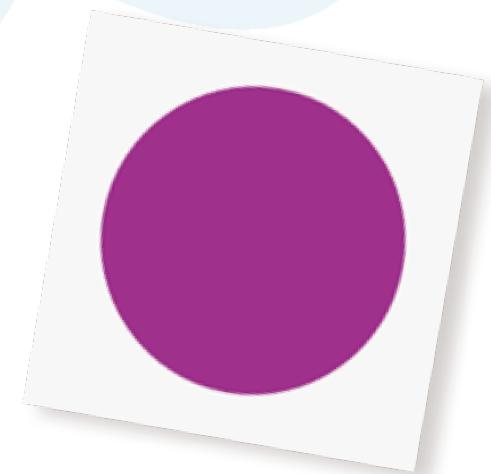
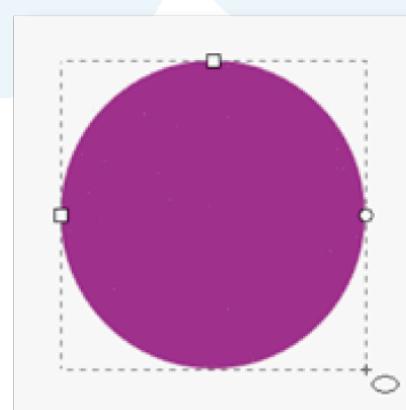
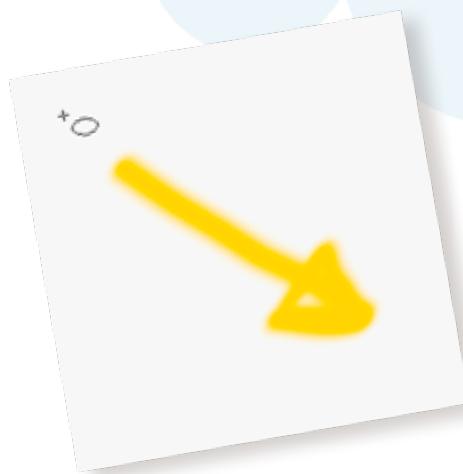
You can see this exercise on video at
ilustritas.com/trees



1. Let's draw a circle!

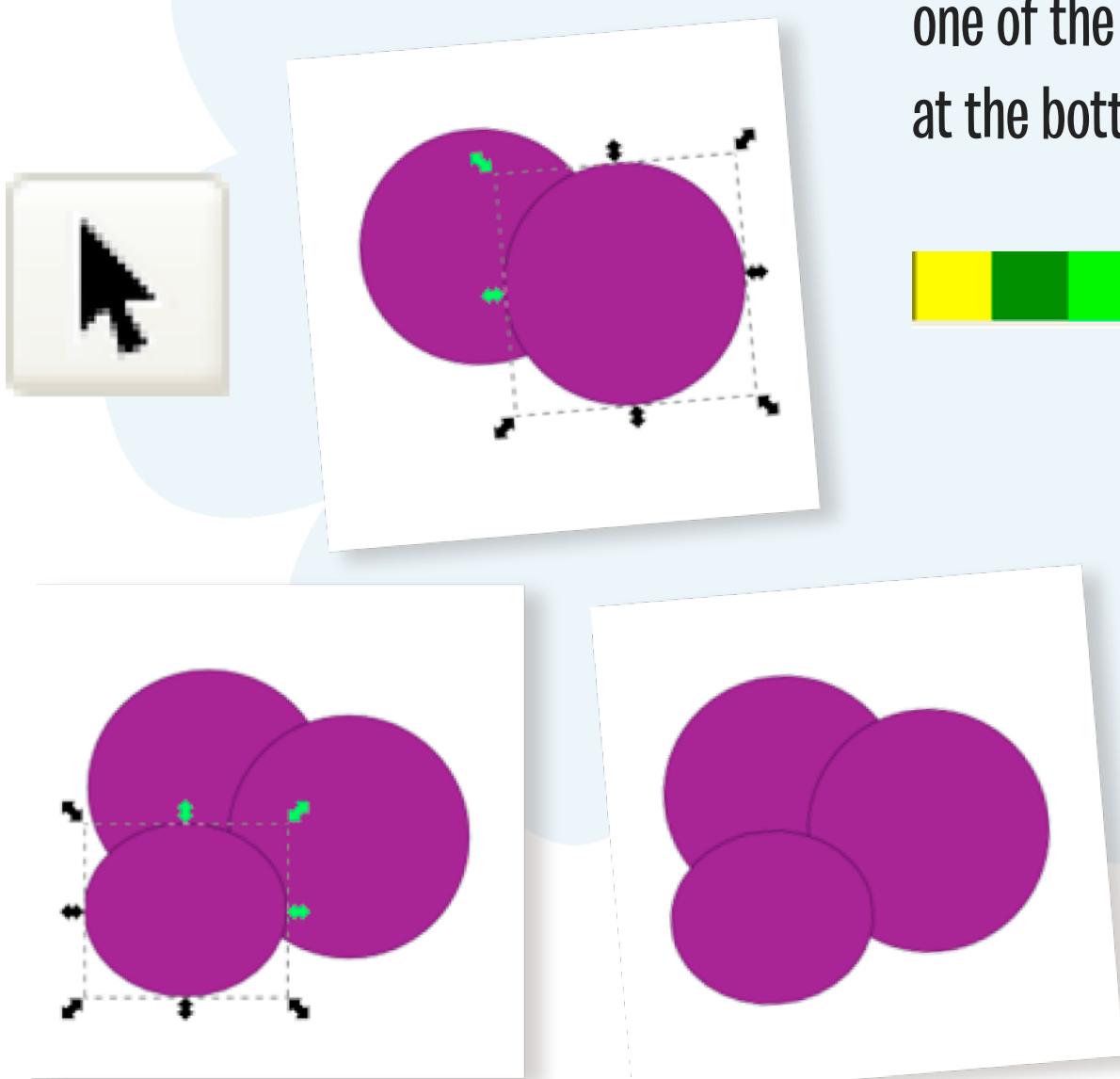
All of the **Inkscape programme** tools are in the **Toolbox** (on the left of the screen). Each tool has its function and little by little, we will learn how to use all of them.

To draw circles, you must select the **tool Create circles, ellipses and arcs:** click on the **tool icon in the Toolbar** on the left of the screen. To draw on the computer screen, click on the centre of the screen and without letting go of the button, drag the mouse diagonally. That way you can choose the shape and also the size of the circle.



2. And now it is time to draw the other circles

Pay attention to make sure each circle slightly overlaps on top of the other circles. And if you want to move the circles or modify their size, you must select the **tool Select and transform objects**, and after that, click on the object you wish to modify.



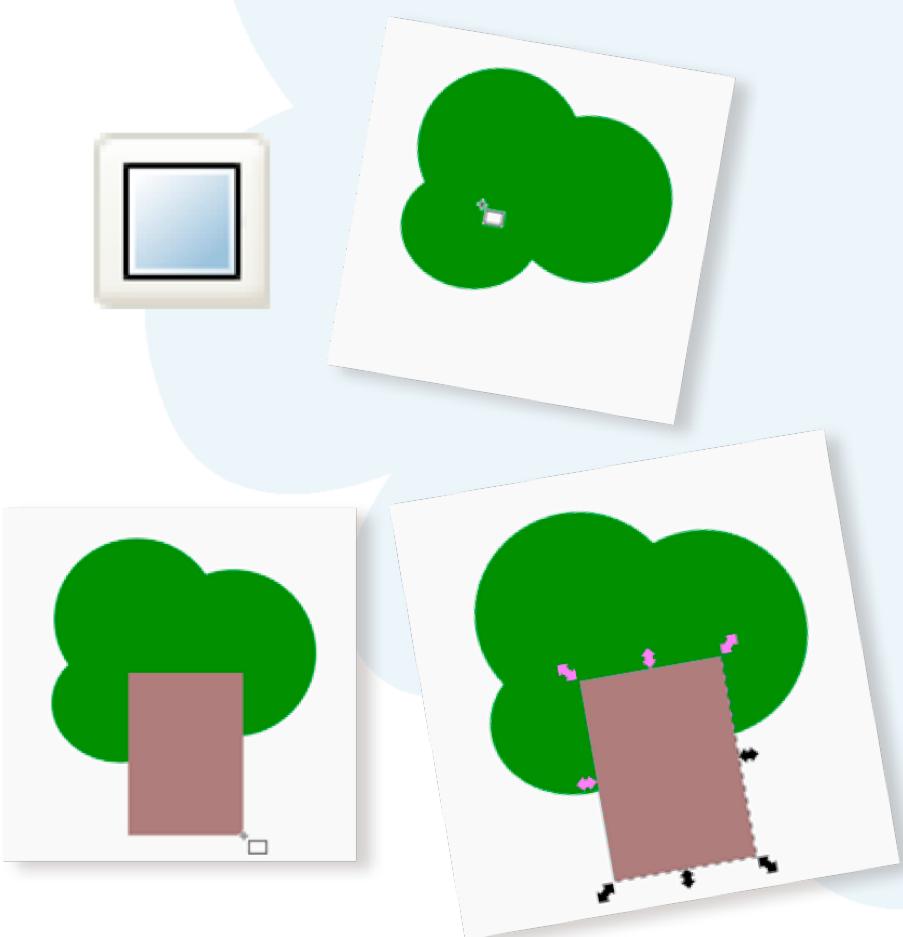
3. The moment to add the colours has arrived!

The moment to add the colours has arrived! First, select all of the circles: Click on the first circle and keep the **Shift key** pressed down with the other hand and then click once on each of the other circles. When all of the circles are selected, click on one of the coloured squares that are at the bottom of the screen.



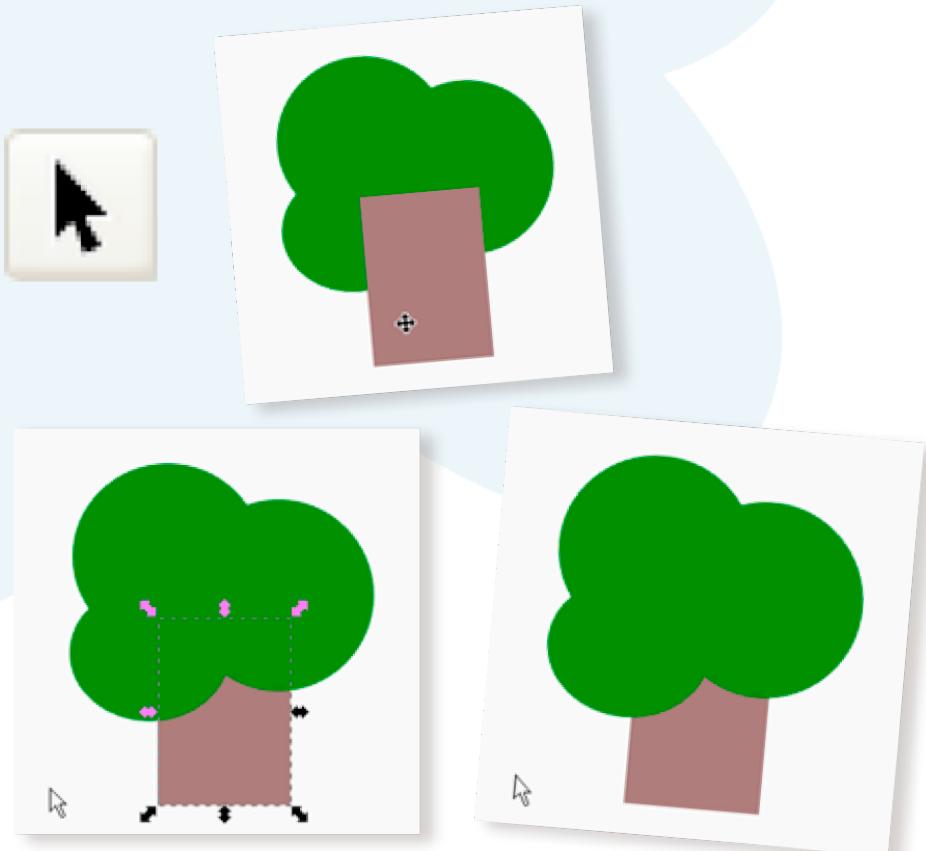
4. It is time to draw a trunk.

It is time to draw a trunk: click once on the screen to deselect the circles, select the tool **Create rectangles and squares** and then choose a colour... Then click and drag the mouse diagonally, which allows you to choose a rectangle shape.



5. The square is above the circles and it should be behind it!

The square is above the circles and it should be behind it! To move the square, select the tool **Select and transform objects** and click on the square and then select the menu **Object > Lower to bottom**.



6. Did you know that there are no two trees exactly alike in the whole world?

There are some trees that
are very similar, but two identical
ones cannot be found!

With the **tool Create circles,
ellipses and arches** and with
the **tool Create rectangles
and squares** draw as many
trees as you like!

Why not take advantage
to draw some apples,
grapes or flowers?

**And now that
you have learned
how to use
these tools...**

**Why not invent
your own
drawings?!**

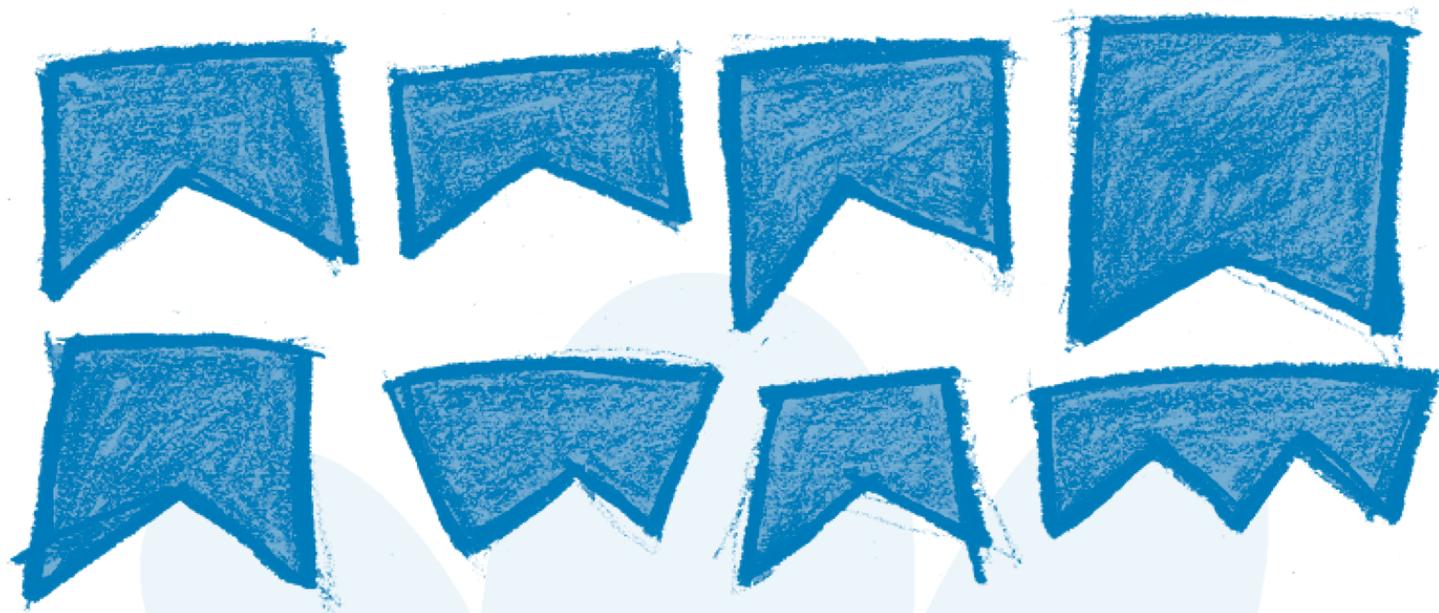


2

Drawing flags is
always fun!

In this exercise we are
going to draw some flags
using the lines which
make their shapes.

We are going to colour the flags
and then copy and paste a lot of them!
You can see this exercise on video at
ilustritas.com/flags

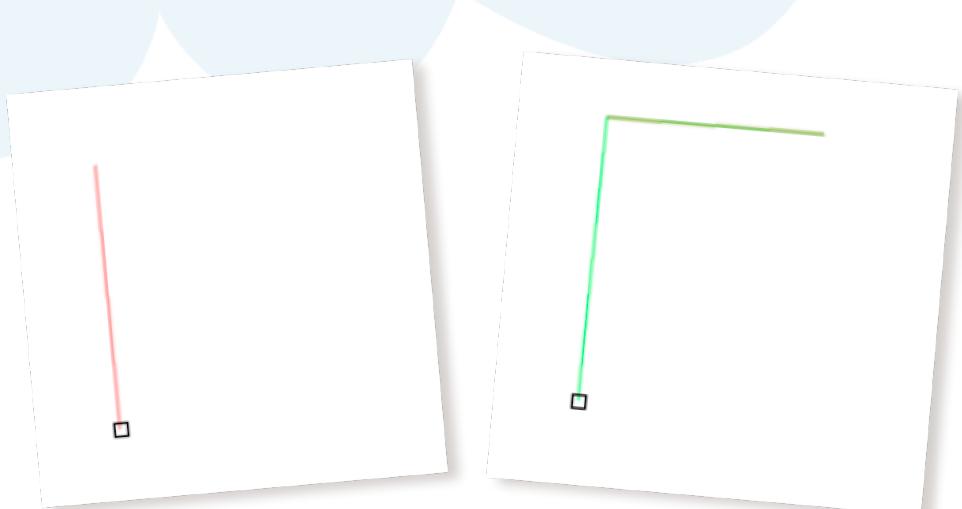


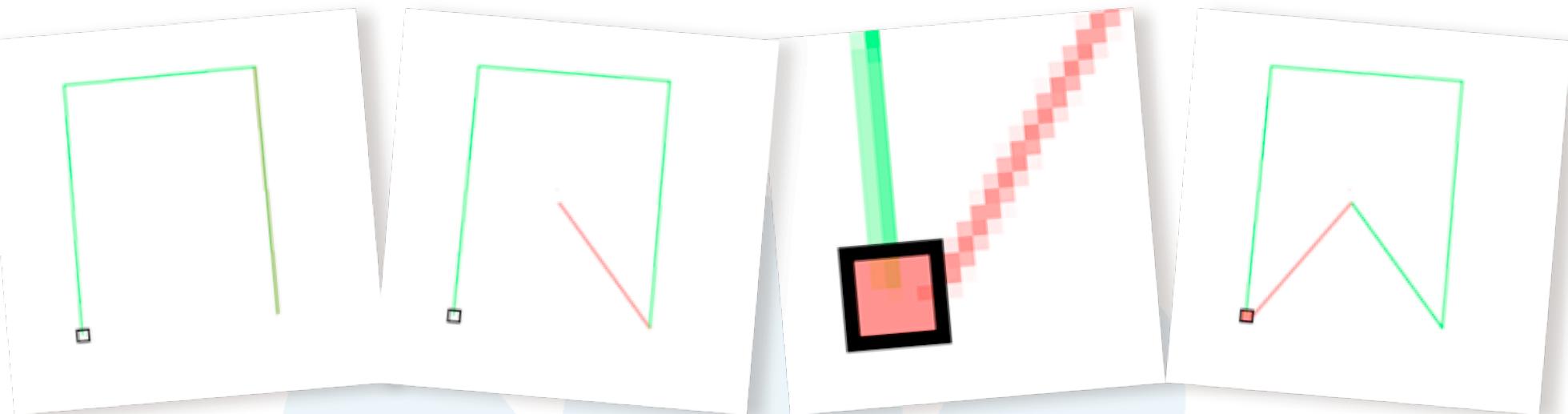
1. Designing with lines.

All of the **Inkscape** tools are in the **Toolbox**, and each tool has its own function. Little by little, we will use each one. To design the lines we are going to use the **tool Draw Bézier curves and straight lines**. Select the tool by clicking once on the icon in the **Toolbox**. With this tool selected, click once on the screen, close to the middle of the page, and be careful: click just once and take your finger off the mouse button!



After clicking once, move the mouse a little higher and notice how a line appears on the screen, which starts where you have clicked and arrives to where the mouse cursor is at... Now click once more and that will create the first line.





2. Line by line, we are designing a flag.

Without clicking, move the mouse to one of the sides... and click again, move the mouse lower and click again. Now the moment to create the flag's "tooth shape" has arrived: move the mouse to the centre of the flag... and click once more.

Ah! the design must be "closed": the last line has to finish exactly where the first one starts, because the design has to be "closed"... look what happens when you move the cursor to the beginning of the first line.

The small square is white and changes to a red colour. And this is important because if it is not closed, the object cannot be coloured in... Click once on this small red square and you will have your flag.

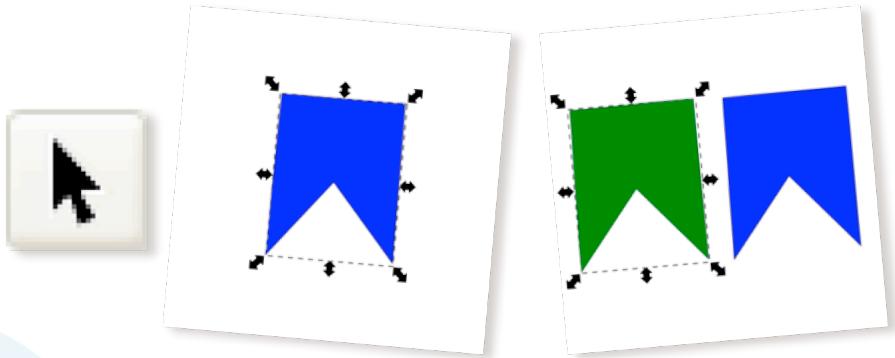
3. It's time to colour in!

With the flag selected, choose a colour: If you can't colour in, it may be that the flag is not selected, or that the flag has not been closed. In this case, it's better to start again and try to close the flag properly.

4. And now we are going to make more flags.

Very good. If you have your flag coloured in, now it's time to make some more flags: This is the fun part of designing with the computer. It is easy to design something (flags, stars, clouds) and then make many copies!

Click on the flag with the **tool Select and transform objects**. Now go to the **menu Edit > Copy** and then to the **menu Edit > Paste**.



Ugh! Now you could try the following:
copy “the two flags” at the same time!
One of the ways to do this is this:

Go to the **menu Edit > Select all**
then to the **menu Edit > Copy** and
then to the **menu Edit > Paste**.

With the **tool Select and transform objects** move and place the flags to where you want them...

5. Make several copies, lots of copies!

With the **tool Select and transform objects** move the second flag towards the first one: click on the second flag and drag it close to the first one... And now, put a new colour on this flag.

Go on!
Try and invent a design which is totally your own.



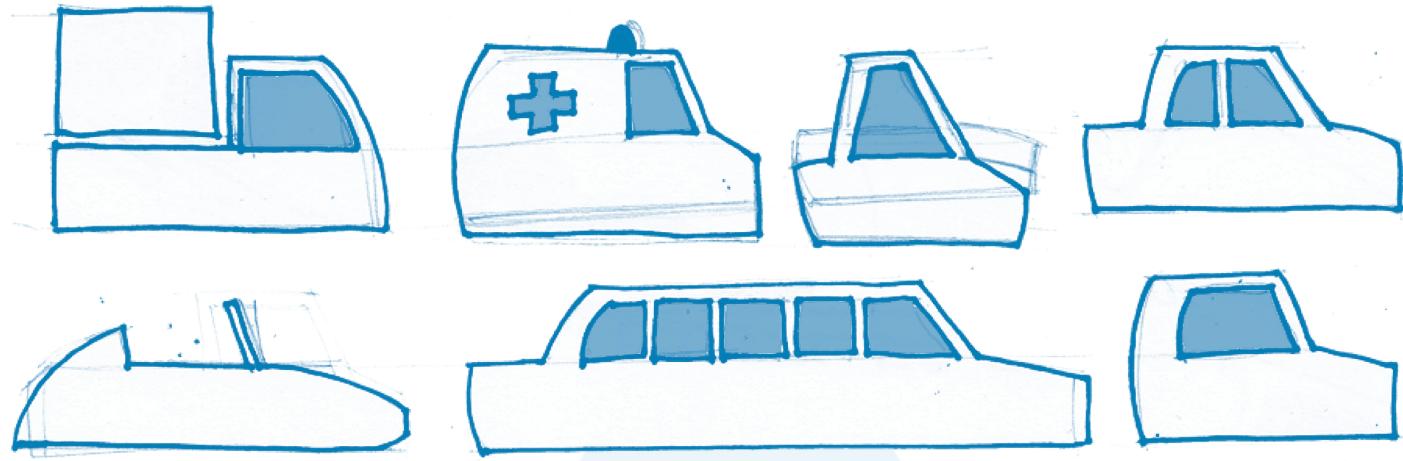
3

**Look at these
cars!**

**This exercise will be
very easy, using the tools
we already know...
We are going to draw
a collection of cars!**

You already know the tools...
now set your imagination free and
draw your cars! Add your favourite
colours, it will be great fun!

You can see this exercise on video at
ilustritas.com/cars



1. Designing lines and curves!

To design the lines in the **Inkscape**, we are going to use the **tool Draw Bézier curves and straight lines**. With this tool selected, click once on the screen, move the mouse a little higher and click once again... that will create your first line!



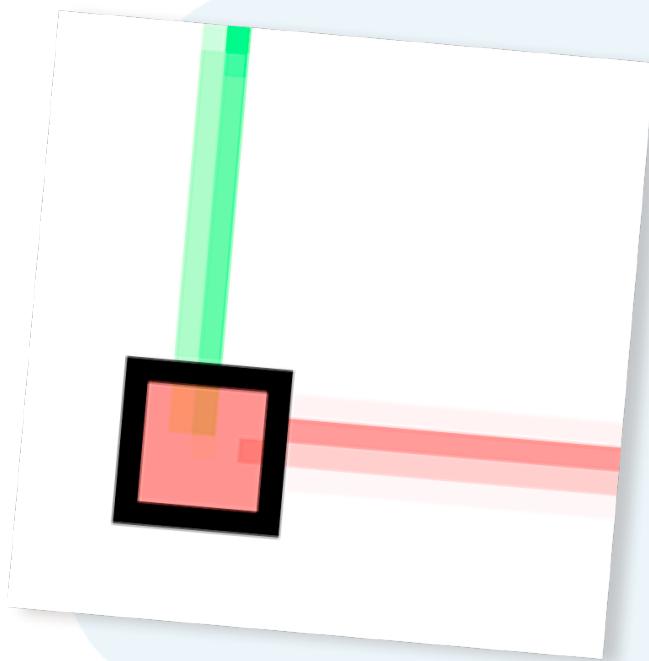
Line by line we are designing a car... Without clicking, move the mouse to one of the sides and then click again! Carry on like that, click again... until you have designed the car's body.

Ah! if you want you can try to design curves as well and not just straight lines... to do that, where there should be a curve, click and without letting go of the button, drag the mouse, click again and you will see that the line becomes a curve!



2. Did you know that you have to “close” the objects?

The last line has to end exactly where the first one starts, because the design has to be closed. There is a small square in white which must change to a red colour!



Click once on this red square...
and you'll have the body of your car!

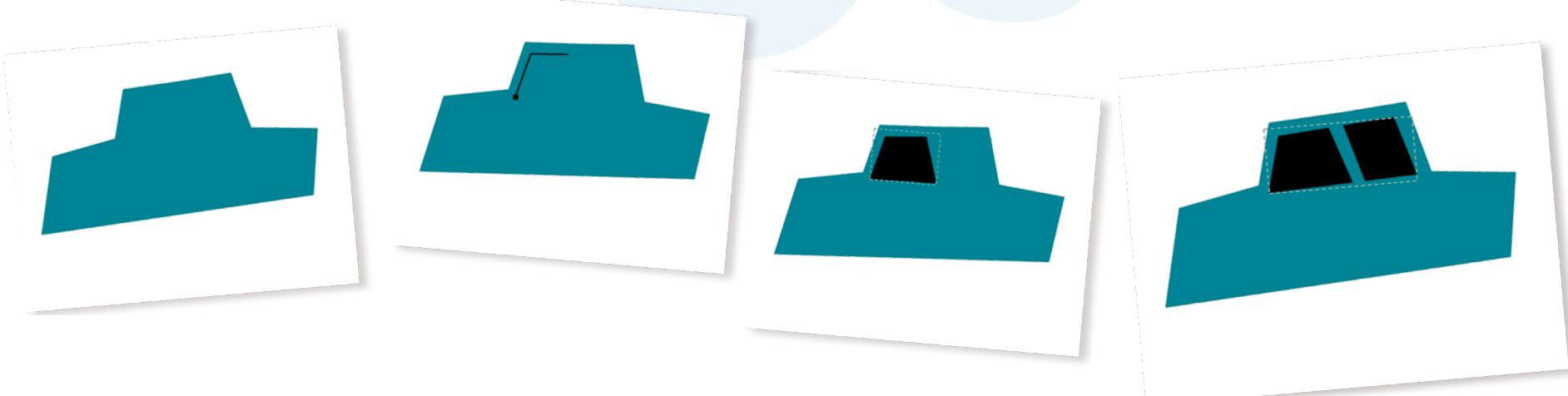
3. Ugh! Now it's time to add the colours.

With the car selected, choose a colour... click on one of the coloured squares that are on the bottom part of the screen.



4. Hey! You have to design the windows!

With the **tool Draw Bézier curves and straight lines**. Design each one of the windows, and then choose a colour for each window.



5. And the tyres!

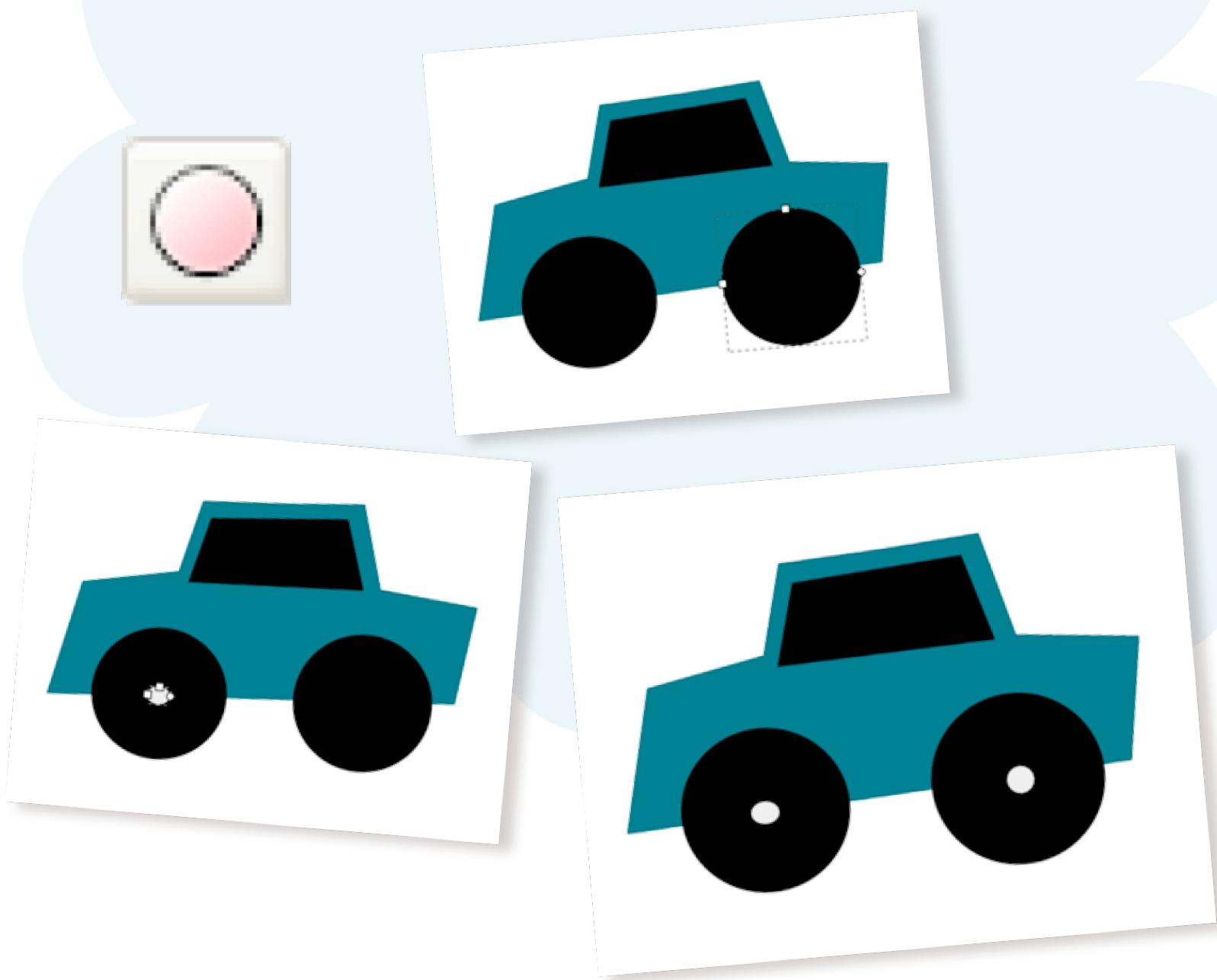
With the **tool Create circles, ellipses and arcs**, design the bigger circle (the black one) first and then the smaller (white) circle.

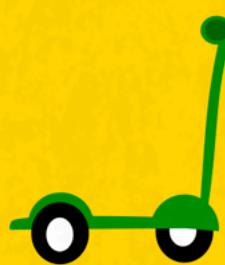
If you don't see the inner circle it is because it is the same colour as the tyre, so, without clicking on anything, you have to select a new colour below.

Be daring!

Go and design more cars!

The more colourful the better, and the more cars the better!





4

What horrors!

**Real monsters...
have to be very ugly.
They are scary!**

We are going to design with the Bézier curves, which are the curve lines that have controls on the tips, which allows their shape to be edited. And to “decorate” we are going to use other tools and effects! You can see this exercise on video at ilustritas.com/monsters

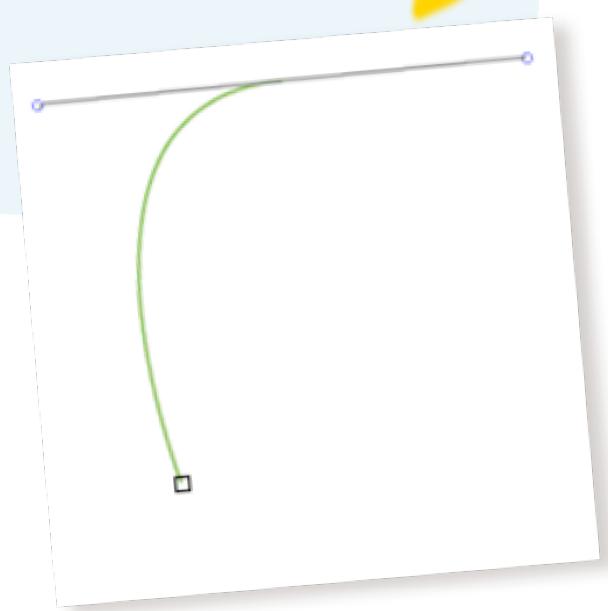
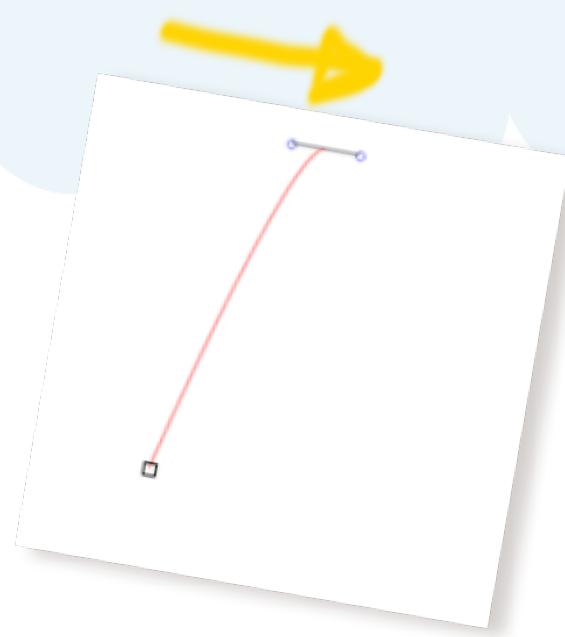
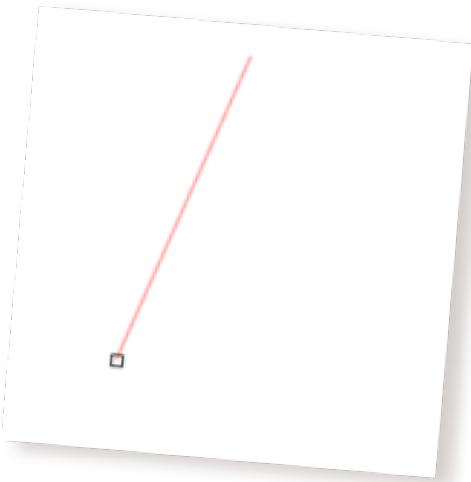


1. We are going to start with a line!

Open the **Inkscape programme**,
and now select the **tool Design Bézier
curves and lines**: click just once...
take your finger off the mouse button
and move it towards the top... and then
a little towards one of the sides.

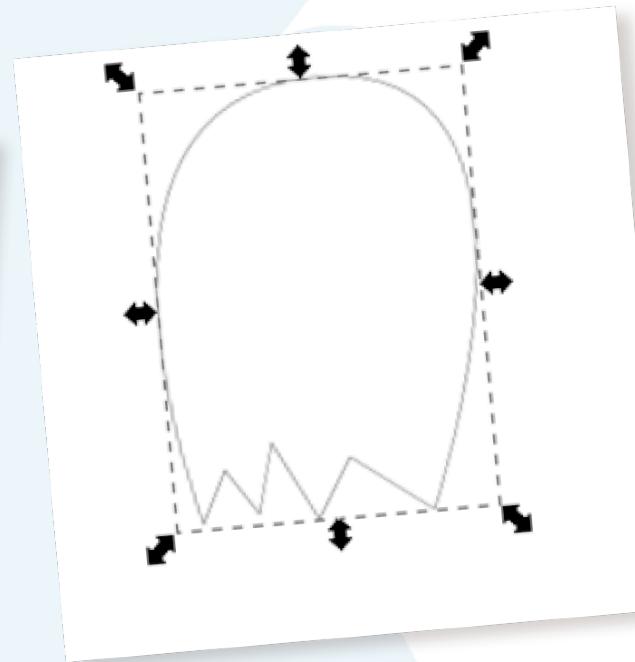
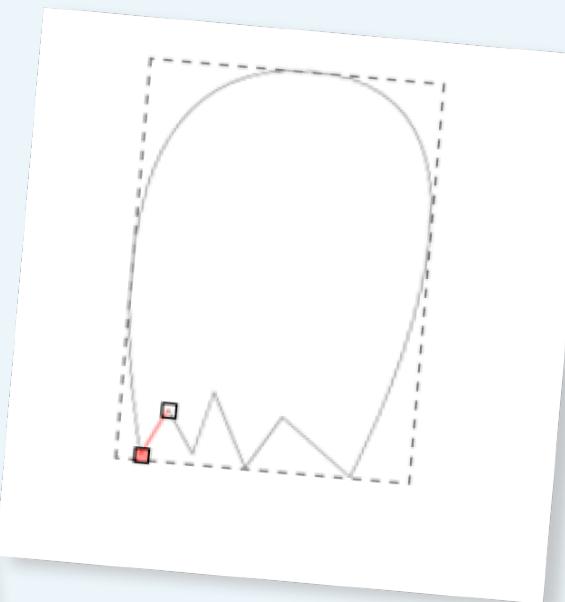
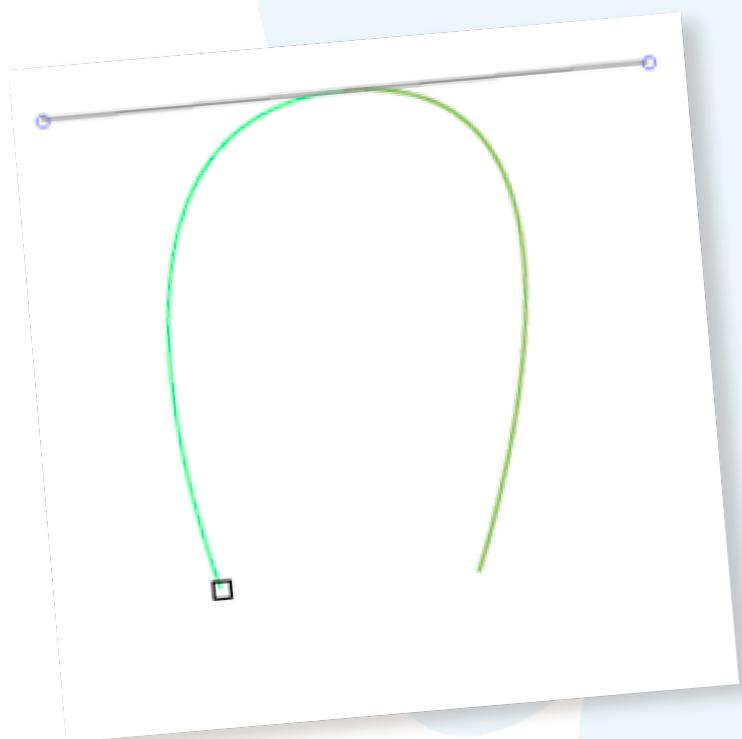
Now you have to click, and keeping the button pressed down, drag the mouse to one side! When you have the curve as you want it, let go of the mouse button.

Notice that the further away you move the mouse from the point where you clicked, the rounder the curve becomes!



2. And now the other side!

Now you have the first line, it is time to design the other side of the monster. You must do this: move the mouse down below, and when it is level with the other line... click again! Now you have the two sides of your monster.



The last line has to finish where the first one starts... notice that when you move the cursor to the start of the first line, the small square changes to red... then click to close the object.

3. And it's time to close the design!

To close the object, in a zig-zag, move the mouse, click, let go of the button and move the mouse again, click, let go of the button... repeat this as many times as you need to close the design.

**Don't be satisfied with
just a monster...**

**Carry on, invent fun
and surprising things!**

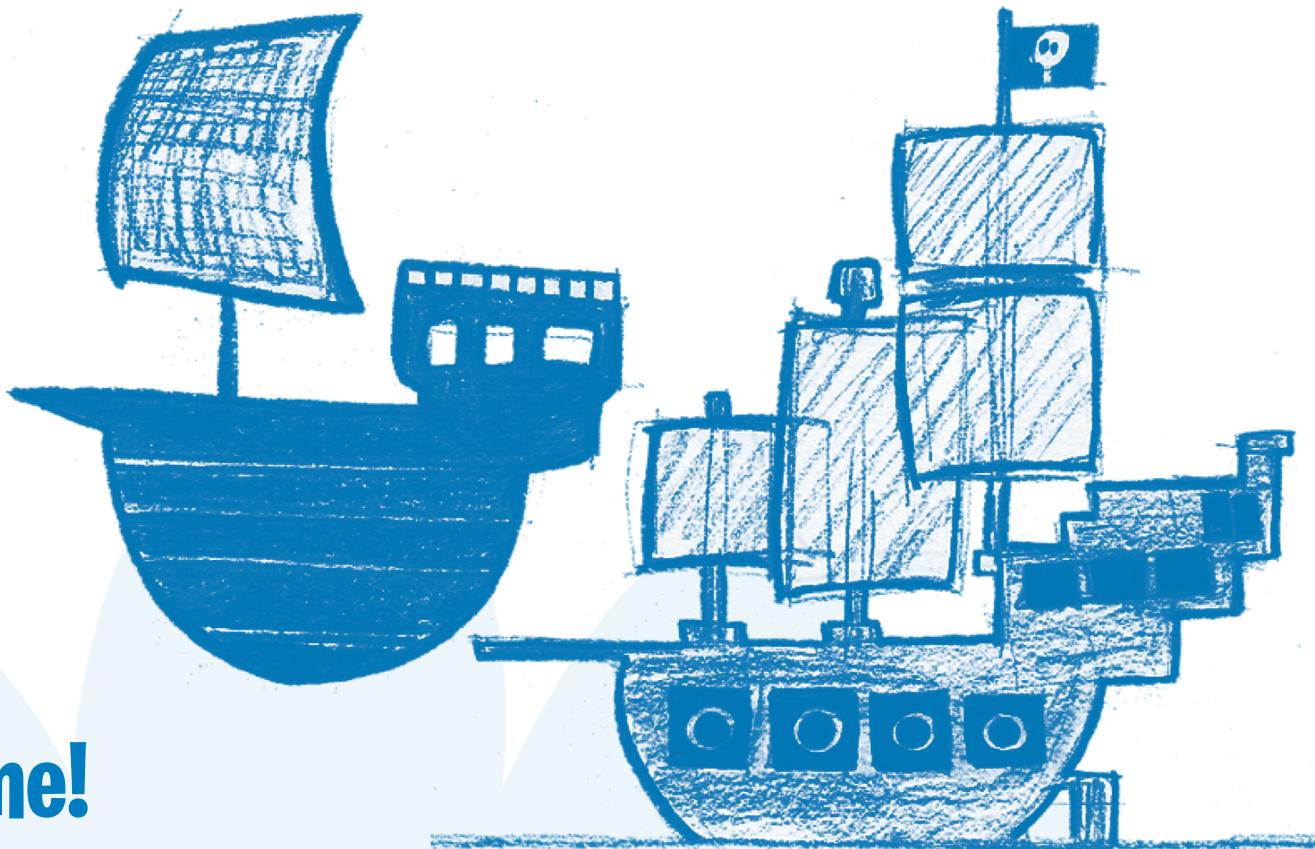


5

**Be careful with
the pirates!**

We can often make elaborated designs from very simple objects.

In this exercise we are going to create a pirate ship: with a skull flag and everything! This time we will use the “zoom” options to be able to fill in all of the details: come on, all aboard! You can see this exercise on video at ilustritas.com/pirates

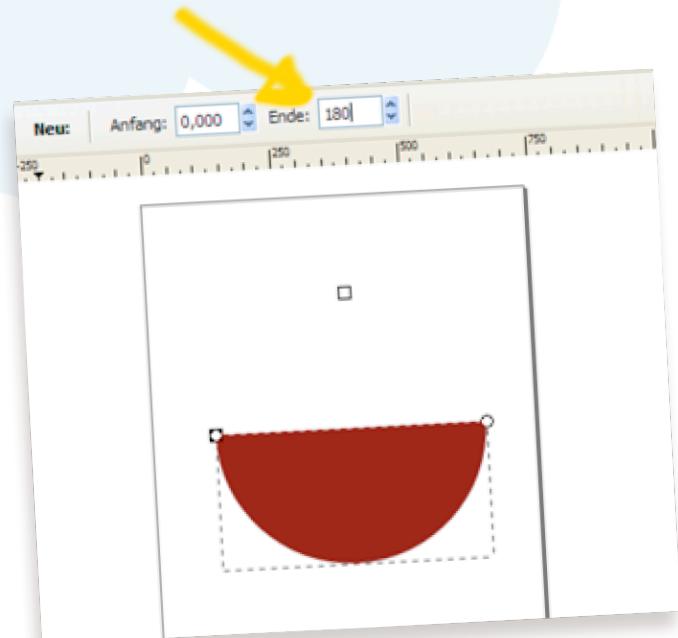
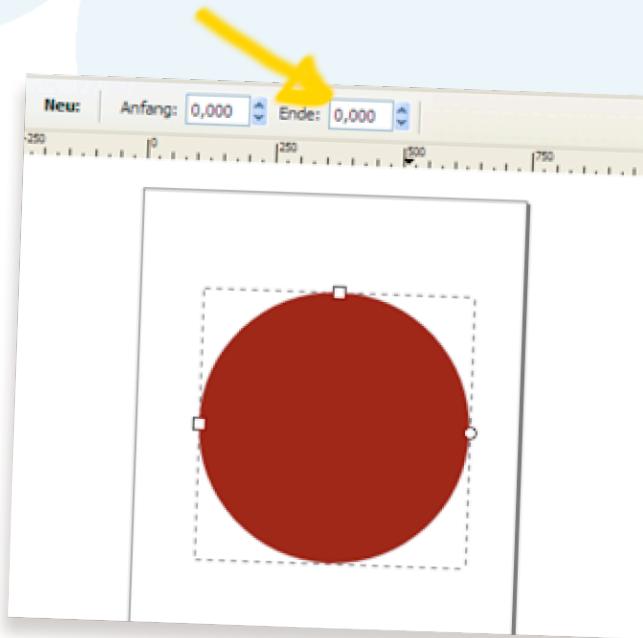


1. We are going to start with a line!

Open a new **Inkscape** page and draw a circle with the **tool Create circles, ellipses and arcs...** With the circle still selected, it has to be completely changed to a half circle. Close to the horizontal ruler, above and to the left, there are a pair of editing boxes which allow you to configure at which point you must start and at which point you finish the arc.

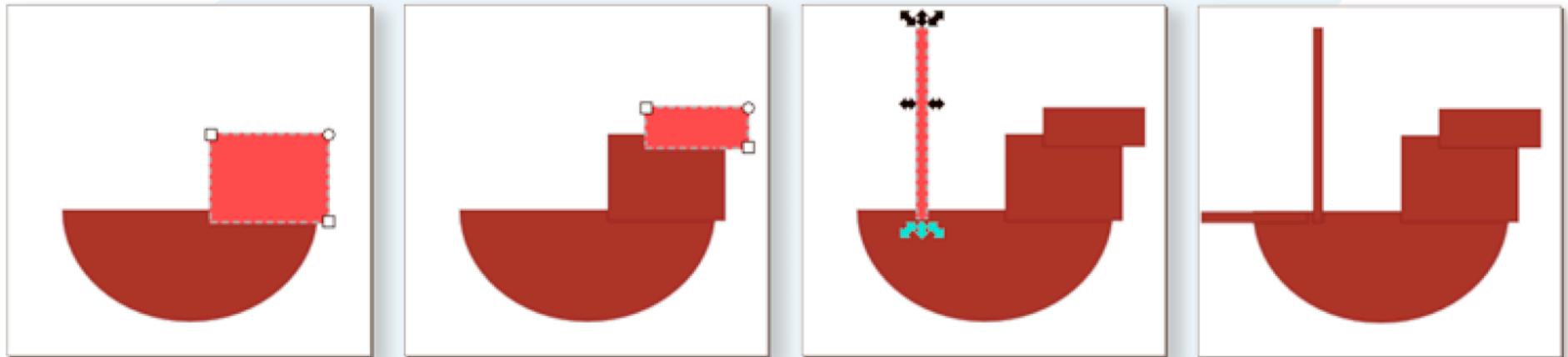
If you press **Start = 0** and **End = 360** you will have a complete circle and if you press **Start = 45** y **End = 315** you will have a Pacman!

To make this pirate ship, edit the arc of the configured circle:
Change: Start = [0] and End = [180]



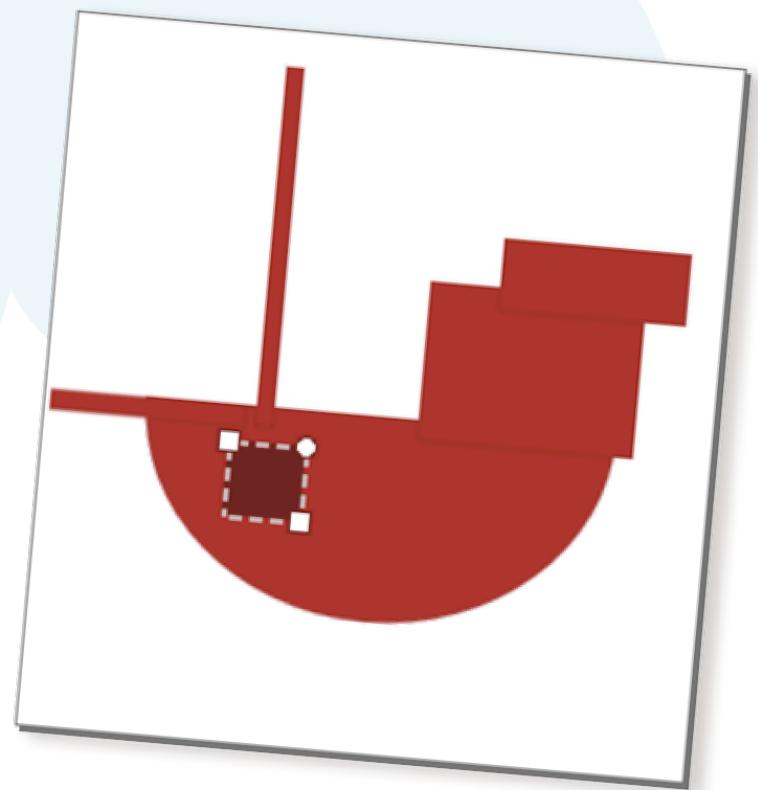
2. And now the other side!

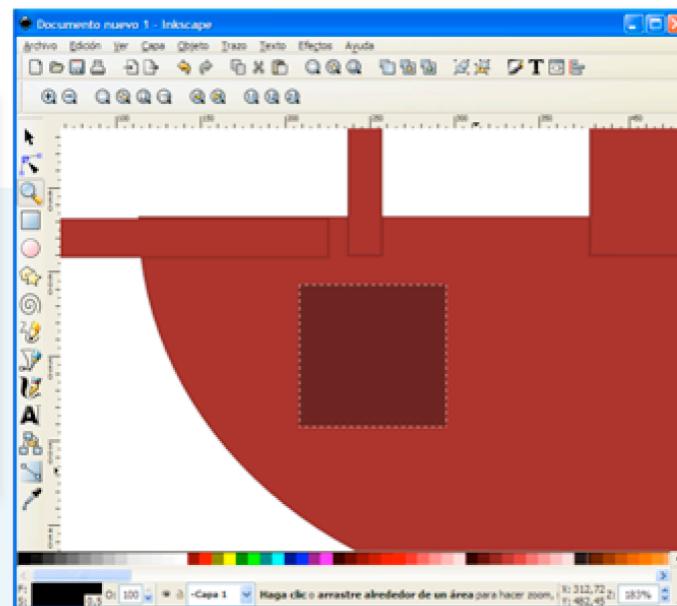
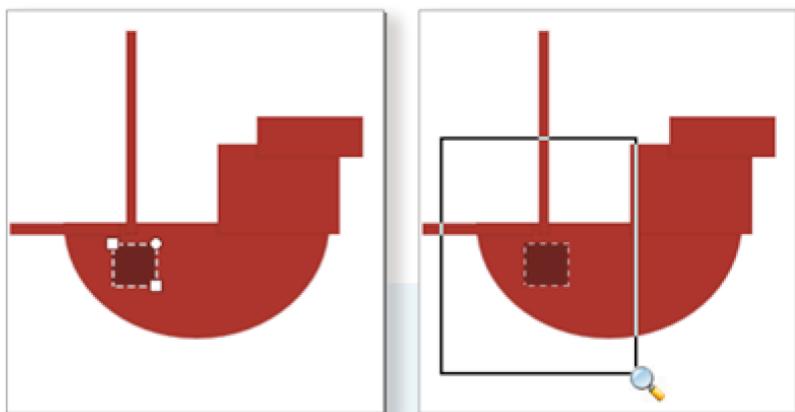
Draw some squares to create some details of the ship's form: It would be good if you painted it all in a wood colour... go to the **menu Edit > Select all** and then choose a colour.



3. Now, add the cannons!

It is better to have no object selected: go to the **menu Edit > Deselect**. Now select the **tool Create rectangles and squares...** and with the tool selected and no object selected, choose the colour black! Now design a square on the hull of the boat.





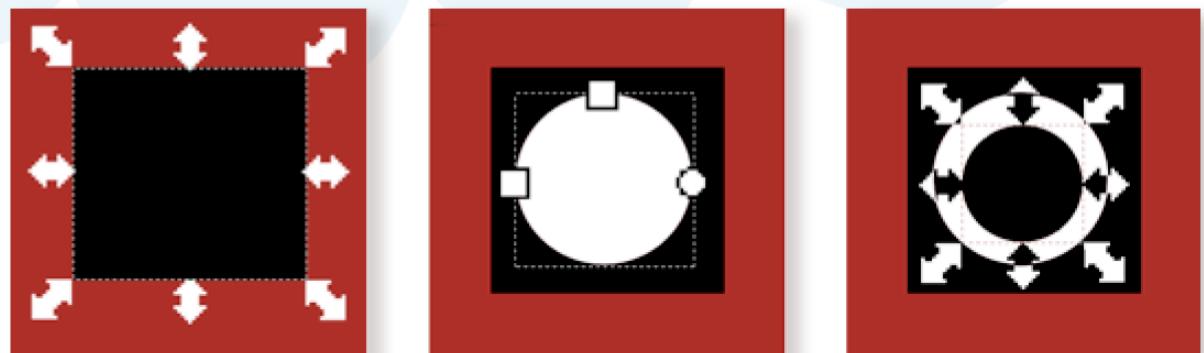
4. It would be good to see in more detail!

Select the **tool Zoom In** or **Zoom Out** click and drag (as if you were going to design a square) close to the black square you have just designed.

If the circle comes out in the middle, you should reconfigure this way: **Change: Start = [0]** and **End = [360]**

5. Now you have to draw a little more!

With the **tool Create circles, ellipses and arcs** draw a circle within the square and colour it grey. Now design another circle and paint it black.



6. Repeat the process to design lots of cannons!

You can design each new cannon from scratch or select the 3 objects (square+circle+circle) and duplicate through the **menu Edit > Copy** and then straight away **menu Edit > Paste**.

7. Do you know how to design a pirate skull?

With the combination of the tools Create squares, circles, design calligraphic lines, move in, move out... you can design your pirate flag!



**Why not design now
a frigate, a cruise ship
or a boat race?**



6

360° of fun!

**Many complex images
are made through repetition
of quite simple elements.**

In this exercise we are going to create impressive designs from objects that will be duplicated and turned around...

You will see that with a very simple technique it is possible to create such different and exclusive objects.

You can see this exercise on video at
ilustritas.com/360degrees

1. First, we are going to open a file:

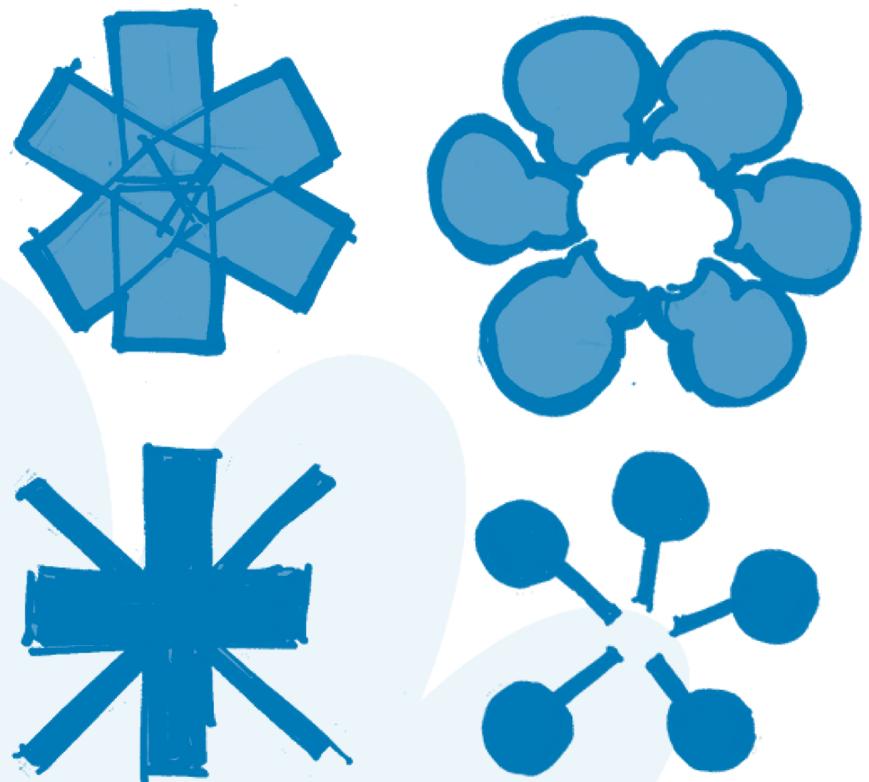
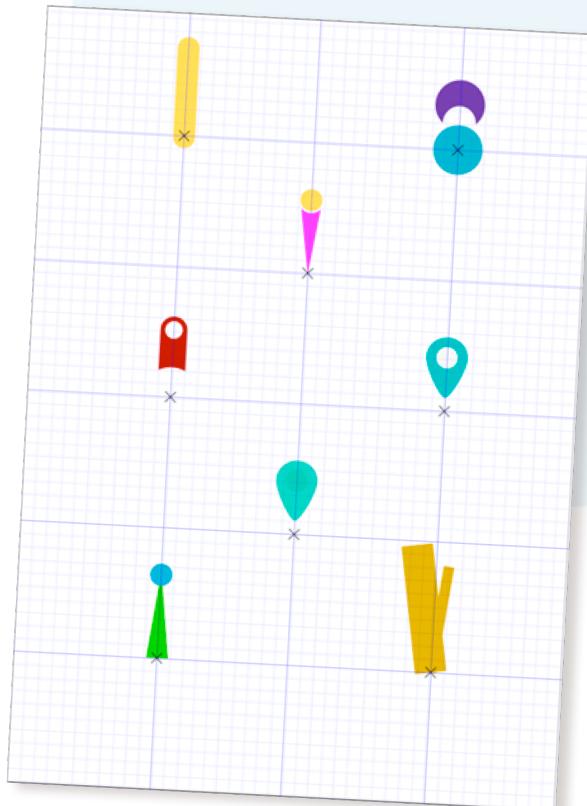
The file is online: ilustritas.com/360.svg

and save on your computer,
for example in the **Desktop**
or in **My Documents**...

Now open this file in the **Inkscape**:

To open a file, you must select the
menu File > Open and look for the
file in the directory where it is saved.

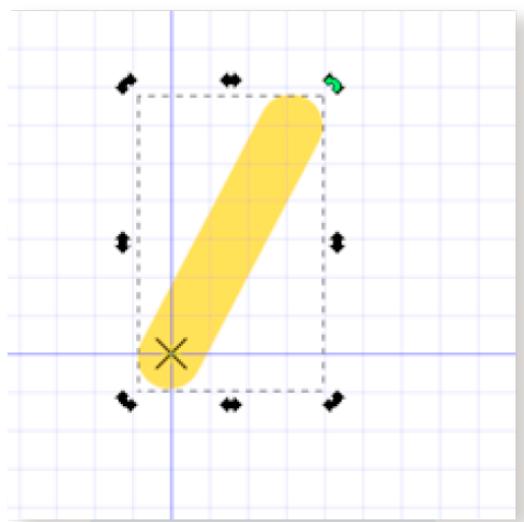
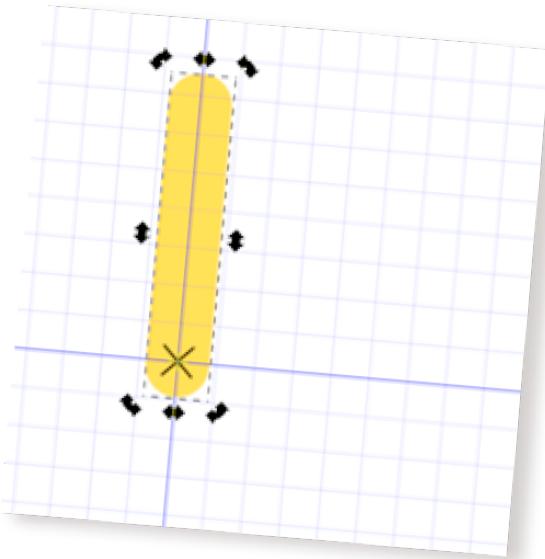
Now you will see that there are a series
of small objects already designed...



2. It spins on a “rotation axis”!

We go to one of them, for example
the yellow one in the top left-hand
corner. Notice that when you click
twice on it, some little curved
arrows appear in the corners...

Click on one of the little arrows
and drag, and you will see that it
turns like the hands on a clock.



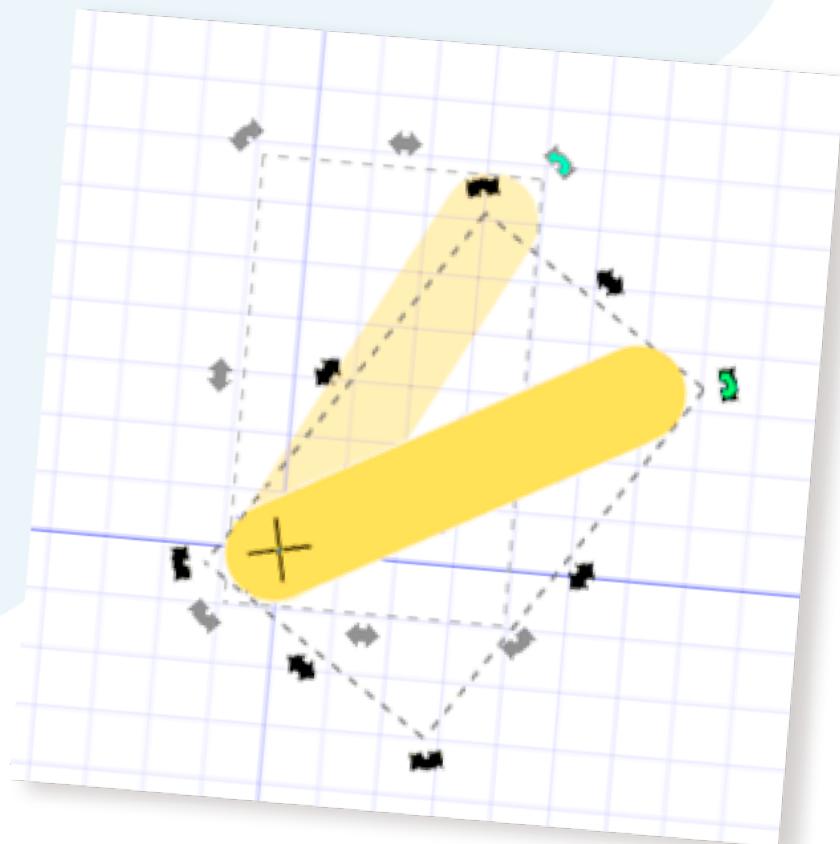
3. Now it's time to work...

In this exercise, as well as making the objects turn, it is important to “multiply them”, and to do this we have to duplicate the object each time before turning it... With the **tool Select and transform objects**, select the object you want to turn and go to the **menu Edit > Duplicate**.

You have just made a duplicate of the selected object, but you can't notice it because one is directly on top of the other.

Did you know that a circumference has 360 degrees? In order for this exercise to have good results, we must make the objects turn, always in an angle of divisible numbers of 360:

2, 3, 4, 5, 6, 8, 9, 12, 15, 18, 20, 24, 30, 36, 40, 45, 60, 72, 90 or 180.



4. It is time to rotate the objects:

Is the object still selected?
(if not, click on the object)...

Go to the **menu Object > Transform**
and now click on the **option Rotate**
and give it a numeric value,
for example 30, and click on **Apply...**

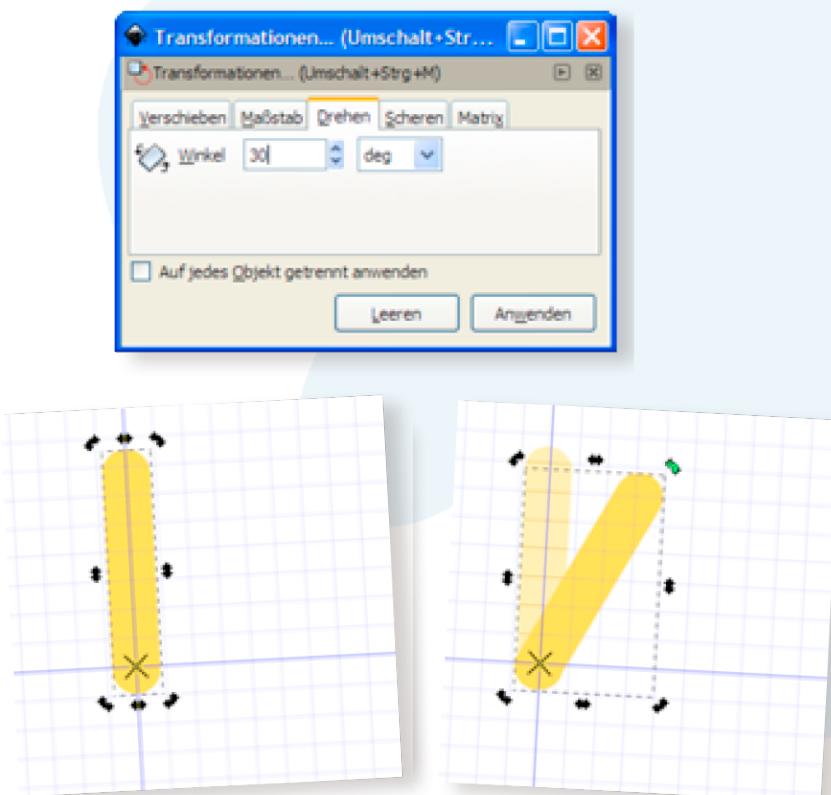
The object turns and there is still
a copy in the previous position.

5. Duplicate and turn, duplicate and turn...

Every time you rotate an object,
you have to return to the
menu Edit > Duplicate
to make a new copy of it and then
click once more on **Apply** in the
option Rotate and with that,
your new design will start to form,
step by step.

6. Now it's time to apply this technique and continue duplicating and turning all of the other objects...

You can also try other angles: don't
forget they have to be multiples of 360°!



Careful: when you create a new object, it turns on itself, in a point which is at its centre, but this point can be changed... you just need to double click and search for a drawing which looks like a “cross” and then, click and drag to where you want this new rotation axis to be.







**Creativity will
always be the most
important thing:
now it's down
to you!**

ilustritas

Copyright © 2009-2014

Carlos Alberto Rodríguez Behning

All rights reserved.

English translation: Ben Hayward

First edition: January 2010

ilustritas.com

rodbeh.es

Creative Commons License

The illustrations can be distributed, copied and exhibited by third parties, providing the necessary credits are shown. The illustrations cannot be used for commercial gains. All rights reserved. The reproduction of this book, without permission of the copyright holder, is strictly forbidden.

creativecommons.org/licenses/by-nc-nd/3.0

Who is Carlos Alberto Rodriguez Behning?

I'm a brazilian designer living in Barcelona (Spain).

I really like drawing, reading books and watching tv,
especially series and documentaries about life of important people.

I like working - maybe because I like my job =] but there are days
when all I want is to calm down looking at my magazines,
making doodles, with my music and messy notes.

I dedicate this book to my few friends and my family,
especially to Leena, Elias and Laura - who are very patient with me
- because I know that there are days when I'm not in a very good mood =[





