



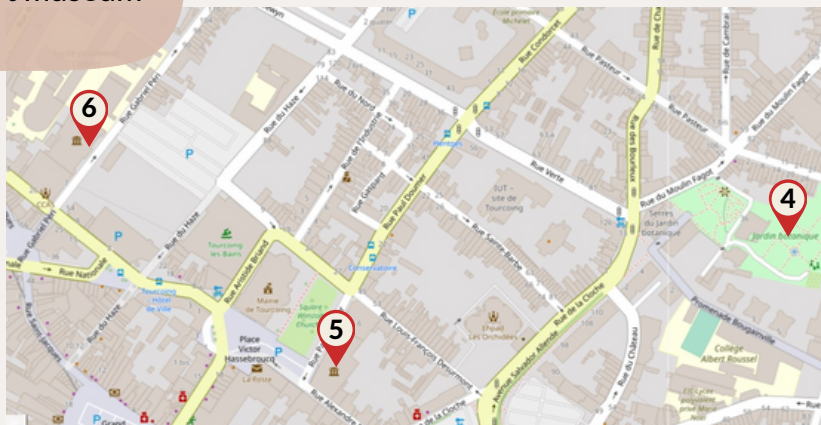
VISIT MATH



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# Itinerary

- 1 Condition Publique
- 2 Crash-test
- 3 Town hall
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- 5 Modern art museum
- 6 IMA



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# VisitMath Tours ROUBAIX TOURCOING



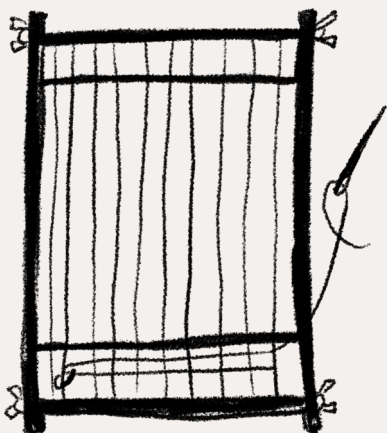
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## Before the tour: a tale in two parts



This tour is built as a two-step journey. Since the ends of both cities can be quite far from one another, you may either use these activities as two short tours or complete the whole tour by taking the bus or the subway, which are easily accessible in both cases (although they require a small fee for pupils who do not live in the Lille metropolis).



Roubaix and Tourcoing are two cities that have fought for their right to become industrial cities in the 19th century. The main architectural constructions date back to that time, as both cities were expanding at an alarming rate. Since the closure of textile industries, both Roubaix and Tourcoing try to attract newcomers with renown universities and cultural innovations



You will need a pen, a pencil, a ruler and a set square as well as a bit of paper to draw on several occasions.

Oi! Sorry, I hadn't noticed you. How are you? Look, I don't have much time to give you, but I'll show you a thing or two about Roubaix. Come along!



**Let's start with the city of Roubaix! Head over to the Condition publique museum.**

## Step 1: The street art museum

La Condition publique is an old textile factory that has been turned into an art workshop and museum, with a focus on street art. You may visit it, but this tour will focus on the outside of the building, on Monge street in particular.

### The rules of the game:

Look at the red doors on the side of the building: there are eight of them, with one slightly separated from the rest by an arch with no door. The goal of the game is to find which door hides the secret entrance to the museum: indeed, the other ones do not lead anywhere, and you might just find a concrete wall behind them...

Are you ready to play? Let's get started!



### Clues (to be solved in that order):

The “first” door is the isolated one, and the eighth door is the last big red door on the side of the building. Start by walking half the distance between the first and eighth door: the door you face does not hide anything. Walk half the remaining distance: the doors to your right and left are not the ones you are looking for.



### Clues (to be solved in that order):

Five doors remaining: find the symmetry of the door in front of which you are standing. The point of symmetry? Door number 4! Once again, the first doors to your left and right are not the ones you are looking for. Three doors are left, the furthest one has no secrets for you either.



You only have two options left, the last door that leads nowhere has a number equal to the number of doors that have been removed so far...

So... Which one is the secret door?

Congratulations on finding the secret door! Few people actually know where they lead. How about the other ones? Well, nobody knows where they might take you...



Your next destination is located on 1, rue Nadaud, on the corner of the street!

## Step 2: The mural



Photo : Lionel GRIPON street-art-trompe-l'œil.info



Brr... This crash-test dummy is sending shivers down my spine...





The city of Roubaix has given itself a dynamic image, thanks in particular to murals like this one. You can see them all over the streets, so keep your eyes peeled!



Do you know what crash-test babies are for? They're used in the automotive industry to predict the impact of accidents on people in the passenger compartment.



Using the wall, calculate the diameter of the circle representing the force of the impact. It is shown in purple on the painting.

The circle on the baby's forehead is 1-meter wide!

#### Hints:

The impact starts from the collision between the cars in the baby's hands.

Draw a horizontal line from the point of impact to the end of the purple area and measure the distance.



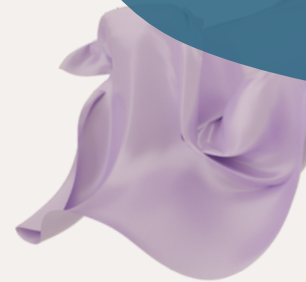
Walk up Grand Rue and head for the town hall.

### Step 3: A homage to a textile city

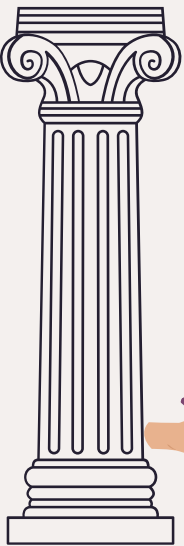


You are now standing in front of the Roubaix town hall. Look at the top of the building: engraved in stone, several sculptures represent the various steps of the textile business.

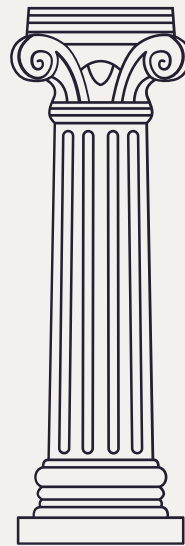
Underneath, the various shapes embody the city's eclectic architecture: it borrows parts of several architectural styles including baroque or neoclassical. This leads to massive yet refined constructions – think about the Sagrada Familia in Barcelona for example.



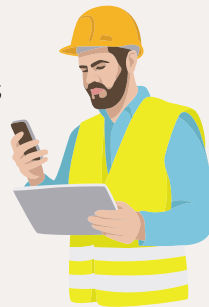
This is what the Roubaix town hall looks like! I mean, you have it in front of your eyes, but this picture should help.



Find some examples of symmetry in the building. Look at the doors, the windows... Draw the axes on the picture whenever you find some!



How's that for a city hall, huh? You know, textile factories have since disappeared, and the buildings are used for other purposes: they have been demolished, or turned into houses and workplaces. Their closure caused massive poverty in the late 20th century.



Next, walk up to the front door of the building to draw it in the right proportions, on the left side of a sheet of paper. Draw the symmetry on the right side.

### Toolbox:

Don't go into too much detail when drawing the door. However, you have to pay extra care when drawing the symmetry of the "Hotel de ville" writing on top of the door!



This is the end of the Roubaix tour... Let's go to Tourcoing now! You should use the bus or the subway to get there, this is quite a long walk!

### Step 4: An oasis in the city

The first part of the second half of our journey takes place in the botanical garden of the city. Enter the French garden (the one with a fountain in the middle) to start the activity!



It feels nice to take a breath of fresh air in the city, doesn't it? Well, this public garden once belonged to, you guessed it, a factory owner who sold his property to the city. Once you are done with this exercise, you should take a look at the other parts of the garden!

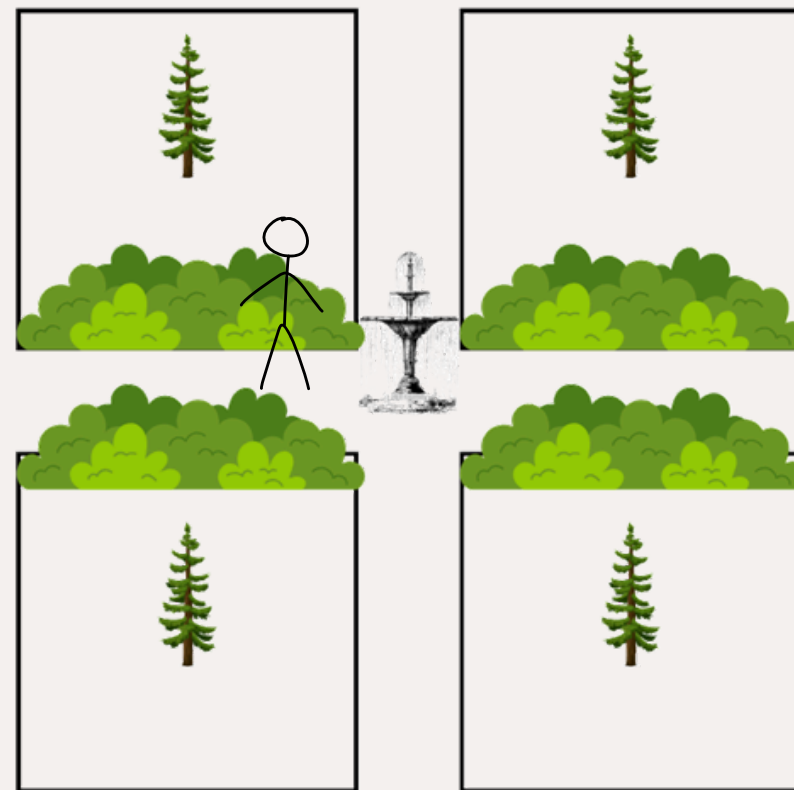


Tourcoing's botanical garden might not be the most impressive in the world, but its alleys are worth the detour! Don't hesitate to pay a visit to the greenhouses nearby, they contain plants that are rarely seen in our part of the world.



### What should we look at?

The French garden – represented below – is a fine example of what can be achieved in botanical gardens. Here, gardeners are asked to show their creativity by arranging the gardens as they see fit.



Can you see the stickman on the drawing? Imagine this is you for the following task.



Starting from the base of the fountain, create  $45^\circ$ ,  $135^\circ$  and  $270^\circ$  angles. Where do they lead you in the park? Can you walk in the direction of each angle? Use these observations to deduct how French gardens are traditionally built.

### Do you need help?

Are you having trouble completing this exercise? Imagine that the stickman - you - is point A, and that the base of the fountain is B. Place C on the drawing according to the instructions!



Walk on rue de la Cloche and rue Alexandre Ribot to get to the next step of this tour.

## Step 5: The fine arts museum



The Muba, short for Fine arts museum, is located in an old private mansion in Tourcoing. Of course, you better go inside to see the paintings and drawings on display, but for now we will stay outside.



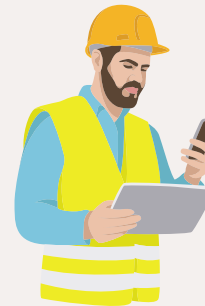
Wikipedia



Take a look at all the windows of this museum. Consider the ones on the two bottom floors as rectangles (let's not be too picky about the top triangular shape) and the top circular ones. How many can you count?



Consider that the diagonal of one of the windows is 4 meters. The bottom of one of the windows is 1 meter long. Draw them on a piece of paper. What is their height? Consider the diameter of one of the circle windows to be 50cm. What is the perimeter and area of those circles?



Both Roubaix and Tourcoing used to be industrial cities, but that does not mean that there should be no room for art! And if you don't like fine arts, you may find the next step more to your liking. Can you guess what it is?



Let's walk to our next target! Walk on rue Nationale and turn right on rue Gabriel Péri. You will notice a towering dark building entirely made of bricks - and glass.

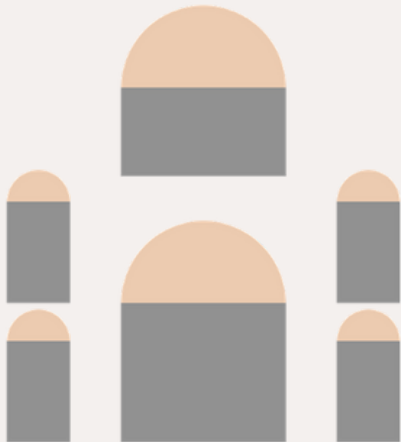


## Step 6: The IMA



The IMA – in French, Institut du monde arabe, “Arab World Institute” – is a library that gathers texts, pictures and testimonies of the Arab world. Once again, we will not head inside during this tour, but you are invited to visit this place after the end of this activity!

The façade of this building – which used to be a swimming school, as the name written above the front door suggests – offers examples of window frames. Those can be schemed as follows:



Are all the figures on the same scale? If no, which of them are? Justify your answer!

### Do you need help?

To compare the scale of two figures, you need to calculate the ratio between the length and width of both figures. If the result is the same, then they are on the same scale!



Congratulations on reaching the end of this tour!

As you may have noticed, the architecture in this part of France has been strongly impacted by the recent past of the region: there are brick walls everywhere and public monuments often feature traces of the textile era.

However, both cities have become active again with the creation of several universities and a flourishing cultural life. Please do visit the museums you have encountered - they are worth the detour!

