VISIT MATH

Itinerary

1 Skatepark

2 Footbridge

3 The Gravier Esplanade

4 The church of the Jacobins

5 Half-timbered house

6 Place du Docteur Esquirol

7 Place des laitiers

8 Cornières street The Saint-Caprais Cathedrale

VisitMath Tours AGEN

Hi, my name is Max! I am 14 years old and was born in the beautiful city of Agen. The city's mayor asked me to show you some of the city's treasures.
So follow me, and I'll take you on this adventure!

Step 1: Perched water

To begin with, I want to show you this construction. I love this place, and I often 😎
skateboard with my friends in the area.
This is the canal bridge. It bears this name because of the boats that sail on it: the bridge is filled with water.
It's crazy when you think about it!

Photo credit Fermat Science

Imagined by engineer de Baudre at the 19th century, part of the Garonne canal goes from Toulouse to Bordeaux. Its construction lasted 40 years and was completed in 1843
With its 23 arches, it is a symbol of ingenuity and made the crossing of Dame Garonne possible, which was difficult because of its capricious nature.
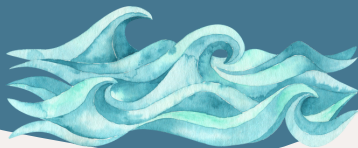
If you stand at the foot of the bridge, you can see it is very high, but can you measure its real height in meters?
1 => 7 meters (A)
2 => 10 meters (P)
3 => 15 meters (F)
Use the woodcutter's cross (indications below) and Thales' theorem to help!

Example: The woodcutter's cross
You will need two sticks or pens of the same length.
It is used to evaluate the height of trees, for example (or of the bridge in our case)

Facing a pillar of the bridge, position one stick in line with your eye horizontally and the other vertically at the end of the first stick.
Move forwards or backwards until the vertical stick is equal to the height of the piler.
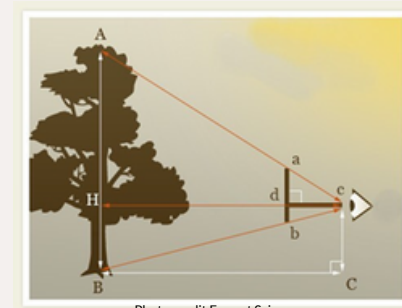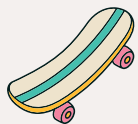Then measure, while walking, the length from your position to the foot of the pillar (1 big step = about 1 meter)

Photo credit Fermat Science

Not bad... It's a good start!

We will now follow the bank of the Garonne upstream to the next bridge (which is actually a footbridge).
Pay attention to a trio of geometric shapes this way: what is this shape?

Step 2: There's no need to run...

We arrive at rue du Péristyle du Gravier, and the footbridge over the Garonne River stands on our right.
I love crossing this footbridge; we have a great view of the surroundings.

Agen has over 2000 years of history and is closely linked to Dame Garonne.
The city held a sad record at the time, being one of the most flooded cities in France.

The round trip on the footbridge is not that long. Knowing that a man walks at 4 km/h and that the footbridge is 263m long, how long will it take - approximately - to get to the other side and back?
1 => 9 min 03 s (L)
2 => 8 min 22 s (J)
3 => 7 min 53 s (R)

Clue:
The distance calculation formula is
D (distance) = V (speed) x t (time)

I told you it was quick!

Well, I see this warm-up has put you into shape, so let's continue!

The Gravier Esplanade is not far.
Can you see a hexagonal-shaped monument?

Ok, so let's go!

Step 3: Let's keep up the tempo

Here we are in front of a bandstand on the Gravier Esplanade. It was a place of concerts and fairs for four centuries!

Besides, looking closer, names are inscribed all around.
Can you guess what they have in common?

Created in 1896, this kiosk has the particularity of having an octagonal shape, which makes it a remarkable work of art. From the beginning, it was a privileged place for the various entertainment events of the city.

The esplanade, originally a marsh, was dried out after a few centuries. It was then a stage for armed duels, river-related businesses and car races. Today, people enjoy walking there and watching the occasional events on the Esplanade.

This Kiosk is is an octagon. Can you take up the challenge of calculating its approximative area?
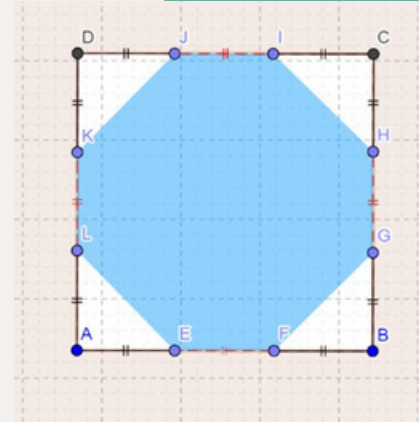
1 => 58 m^2 (E)
2 => 64 m^2 (U)
3 => 67 m^2 (A)

Clues:

- Let say the segment KL = 4,5 meters and DK segment = 2meters
- The octagon is contained within a square.
- It is completed with triangles to form the square.
- Observe the coding of the square; it will allow you to start the exercise.

Wow, I am impressed with your mathematical knowledge!

Following a straight line parallel to the peristyle, take Lomet Street.

Photo credit Fermat Science

A piece of advice: don't forget to use the pedestrian crossing; taking risks would be a shame!

Step 4: The angle of view

Following Lomet Street, you come to a crossroads. Let's go towards of the big door with a knocker towards the Richard Coeur de Lion street.

Here's a little anecdote:
I've learned about this character from the Robin Hood cartoon. Do you know him?

We are now at the church of the Jacobins.
You may wonder: who they are...

This church is the vestige of the Dominican Convent, founded in the 13th century. This Convent once occupied an important district west of the city between Place des Jacobins, Rue de Lomet, and Allée des Graviers.
Jacobinism is a current of thought defended during the French Revolution in 1789. The Dominicans are Catholic religious born in the Toulouse region during the Cathar era.

Let's stop west of the church to look at its steps. The area with the steps can be divided into five angular sectors with the church door as its apex: the two "small" ones measure 15° each, and the "large" one measures 60°.
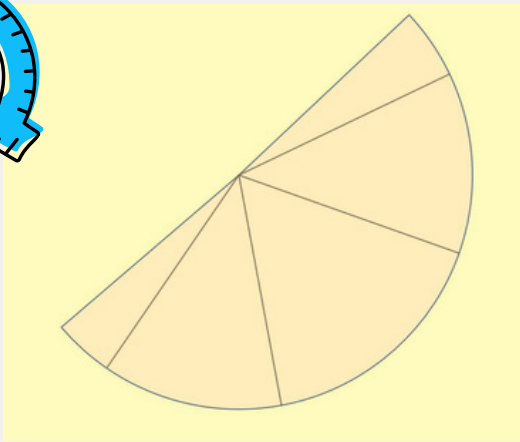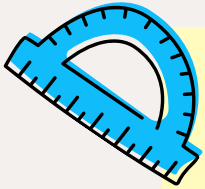
180°

Photo credit Fermat Science

What is the measurement of each of the two remaining angular sectors (the two "medium") knowing that a flat angle measures 180°?
1 => 90° (L)
2 => 120° (V)
3 => 45° (N)

Although they usually go up, the stairs of several churches in Agen go down. This is because of the Garonne floods: the city floors have been raised to prevent damage, and the bottom of the steps corresponds to the Middle-Ages ground level.

Here we go again towards the Richard Coeur de Lion street.

LET'S GO

Step 5: Medieval Agen

There is a famous house in Agen called "The half-timbered house" you can see it at the corner of rue Voltaire.

A little advice: look up and observe the facade. Looking closely, you can see shapes that may seem like Roman numerals to us...

Can you write your date of birth in Roman numerals?
Here is a little memo:
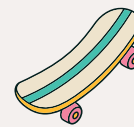I=1   L=50   M = 1000
V=5   C=100
X=10   D = 500

Now let's go back to Beauville Street to find the Town Hall.

On the path, be careful where you step, or like me, you could trip over a strange stone.

Look up and observe the facades closely: you can see a common geometric shape hiding somewhere.

The half-timbered houses and the narrow Beauville street take us directly back to the Middle Ages.
Its roofs and facades have been listed as Historic Monuments since 1993.
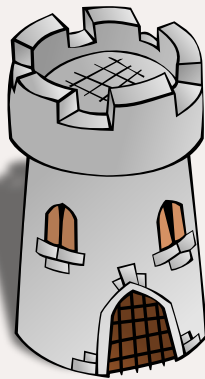
In the Middle Ages, Agen was surrounded by ramparts, towers and fortified gates. Gradually, over the centuries, the city expanded. During the French Revolution in the 18th century, Agen had no less than five parishes and three orders that shared the town: the clergy, the nobility, and the third estate.

Step 6: But where is Mr. Mayor ?

That's it; we got out of this mini medieval labyrinth.
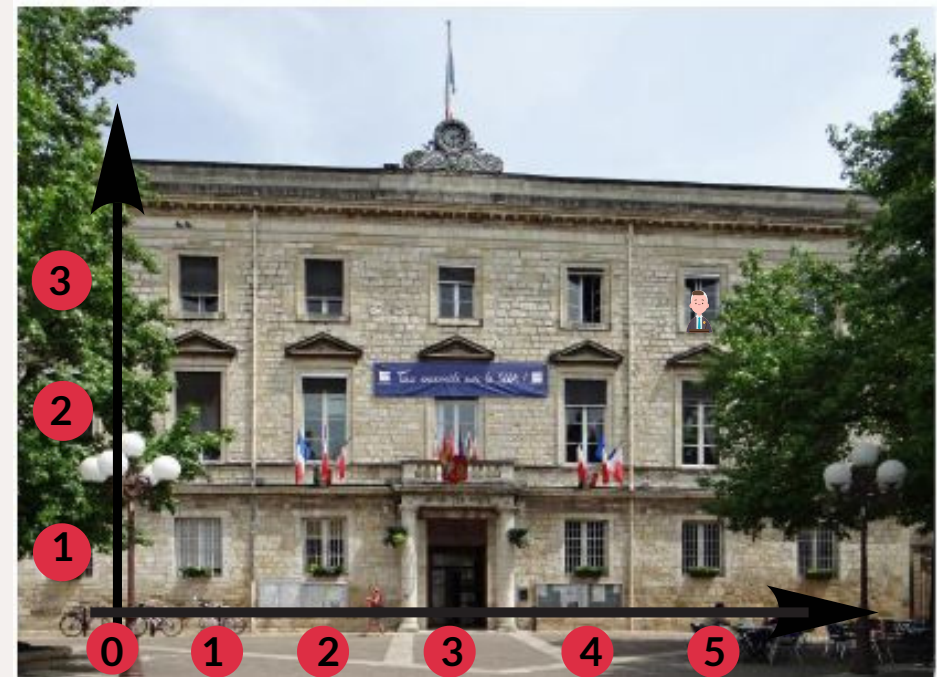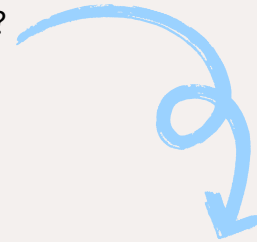Here we are on the Place du Docteur Esquirol, can you see the Town Hall?

Photo credit Fermat Science

Mr. Mayor is at one of the windows of the town hall, can you see him?

Can you give the coordinates of his position?

1 => (5;3) (E)
2 => (1;5) (S)
3 => (5;1) (X)

Well done! You are so good at this!

Now, opposite the Town Hall, take Chaudordy Street to the left as far as Rue Montesquieu.

Keep your eyes open; a Gallo-Roman vestige is around here. After passing under the building, observe the facade; there is a plaque. It is a little reminder of the famous Montesquieu.

Here is his most beautiful profile.

Close to you is another church: the Notre Dame du Bourg chapel, which also has descending steps.

Let's take the path of Montesquieu Street together towards the Place des Laitiers.

Step 7: A story of merchants

This peaceful square was once a strategic place where peasants from the surrounding farms met to sell their milk to the city's inhabitants.

I suggest you go to Cornières Street. It offers a good insight into the city's economic life back in the day. It is one of the most emblematic streets of Agen, and it is really worth the detour!

Take a good look at the architecture of the houses. Have you spotted the ogive and basket-handle shapes?

A true reflection of the economic life of the city of Agen. Many merchants had their stalls there.
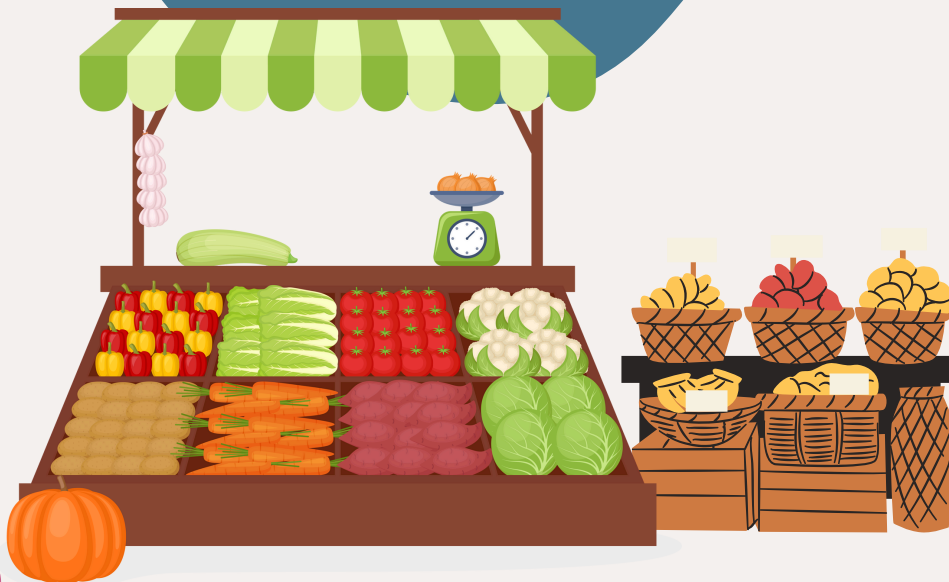
At the corner of Florac Street, please look at the house's facade. How many triangles are there in the rectangle under the window?

1 => 8 (A)

2 => 6 (V)

3 => 10 (R)

You have a sharp eye!

Now, quickly find the cathedral

Step 8: At the crossroads

This cathedral is called Saint Caprais Cathedral. Built in the 12th century and classified as a historic monument in 1862, it is a place of passage for many visitors.

Above the door is an equilateral triangle in which a circle is drawn.

The inscribed circle is tangent to the three sides of the triangle.

The circle and each side of the triangle have only one point in common.

Disregarding the small circles below the triangle, count the number of points in the figure where one circle and 1 line are tangent.

1 => 6 (E)
2 => 9 (U)
3 => 12 (N)

Clue:
Etymology of the word tangent:
Tangere (Latin) means "to touch".

WOW! Nice performance.

You still have one last challenge to take up, and this one will allow you to discover the emblematic hidden treasure of the city of Agen.
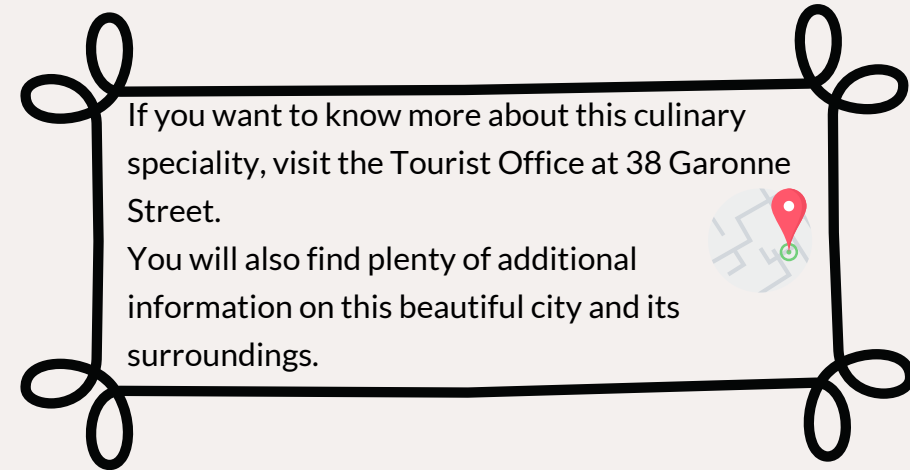
Are you ready? Here we go!

Take each correct answer, note the associated letter, and then note it on the dashes below. The name of the ultimate treasure will be revealed to you. 😉

Bravo!!!!!!

If you want to know more about this culinary speciality, visit the Tourist Office at 38 Garonne Street.
You will also find plenty of additional information on this beautiful city and its surroundings.

My mission ends here; it was a pleasure to help you discover my city.

See you soon, maybe in another city for new adventures!