



VISIT MATH



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Itinerary



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VisitMath Tour MONTAUBAN



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Fermat
SCIENCE





Welcome to my territory!

I'm Charlie, king of the neighbourhood. I love to flatter myself.



Yes, I know, I

Is this your first time in Montauban?

I was born here! And not just once; I'm already into my 9th life at least...

I know this city like the back of my paw, it holds no secrets for me and believe me, I've seen many people come and go over the years!

Follow me on a tour of the city!

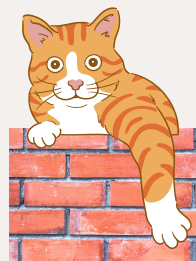


Step 1: The old College

Here we are in front of a monument that I'm particularly fond of. It has always dazzled me with its beauty and its bright red bricks, typical of the region.



Photo credit Wikimedia commons



Go up to the entrance of the Tourist Office and look down from the balcony at the paving on the ground. You can see geometric shapes, huge squares...



Built in the 17th century, this building was initially a private mansion belonging to a local dignitary. In 1676, the Jesuits moved in and began extension work to build a college for up to 300 pupils.

During the French Revolution, the building became a foundry for creating cannons for the army of the Republic.

Recognised as a historic monument in the 1970s, it now houses the "Maison de la Culture" and is home to several cultural associations.



A little paving game:

Imagine that the forecourt at your feet has been truncated and was originally rectangular, containing rectangles with a grey outline: 7 wide and ten long. Each contained small pink squares inside.

In this case, how many rectangles were there?

And how many little pink squares were there in all?





Answer:

Number of rectangles =>

Number of small squares =>



Photo credit Fermat Science



Let's go down the stairs and walk along the right-hand side of the building, where there is a pretty statue just behind it.

Do you recognise this character?

Yes, it's him: the Emperor NAPOLEON!

For the anecdote, I met him in 1808 in my 5th life, and he was right to always be on a horse... because he really wasn't very tall.

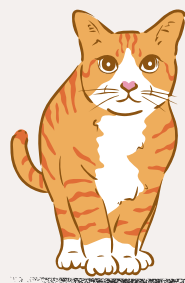


Photo credit Fermat Science

Step 2: Stroll along the alleys

Right next to us is the Empereur alley.

You have to admit they didn't have to look very far for the name.



Notice the play of colours on the floor - I wonder whose idea that was? And whether it was done on purpose... or not!

Since the 17th century, the Emperor's and Mortarieu's alleys have been above the town's old moat. They have recently been refurbished with natural stone paving and an open-air art gallery featuring a host of sculptures. A bandstand, reminiscent of the one that existed in the 1900s, has also been installed.



On the alley, look at the coloured floor... do you think it contains a logical sequence?

Answer:

=> YES

=> NO

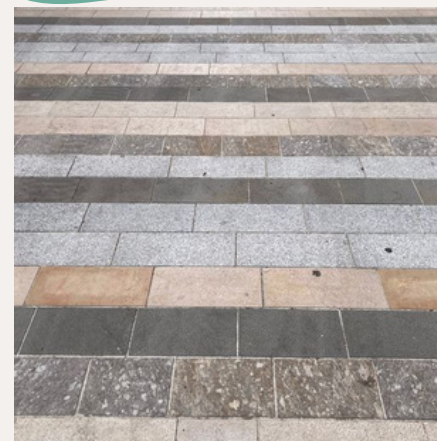


Photo credit Fermat Science





Let's continue down the alley...

Another statue, which is one of my favourites, is called THE WAVE.



Photo credit Fermat Science

I've mastered the wave, too, haven't I?



Step 3: A hero of Ancient Greece

Now let's continue to the end of the Mortarieu's alley, which follows the Empereur's alleys and meet HÉRACLÈS ARCHER, a work inspired by Antoine Bourdelle, a good friend of mine in his day.

I don't want to boast but, I was one of his favourite models.

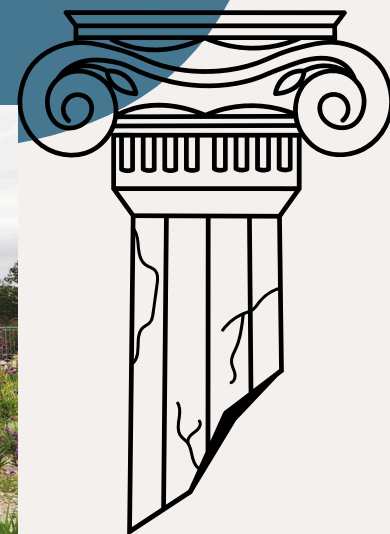


Heracles, also known as Hercules, is a hero of Greek mythology.

Antoine Bourdelle, a French sculptor born in Montauban, wanted to depict the bravery of Heracles in his fight against the birds of the Lake of Stymphalos from the story of his 12 labours.



Photo credit Fermat Science



Calculating a height :

Look around and find out where his arrows are. Using the method of the woodcutter's cross (and therefore Thales' theorem), which you can find on the next page, measure the height of the highest arrow on this sculpture.

Answer:

=>

Using the woodcutter's cross

It consists of 2 sticks or pens of the same length.

It is used to measure the height of trees, for example (or an arrow, in our case).

Facing one of the arrows, place one stick horizontally in line with your eye and the other vertically at the end of the first stick.

Move forwards or backwards until the vertical stick is equal to the size of one of the arrows.

Then, while walking, measure the length from your position to the foot of the chosen arrow (1 big step = about 1 metre).

Repeat the manoeuvre to compare heights and find the height of the highest arrow.

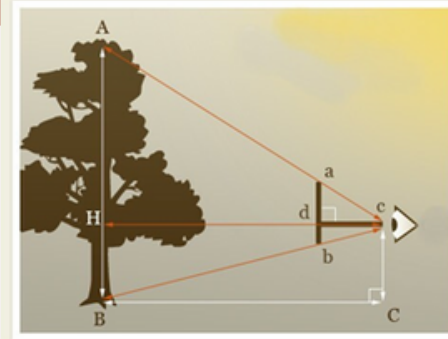
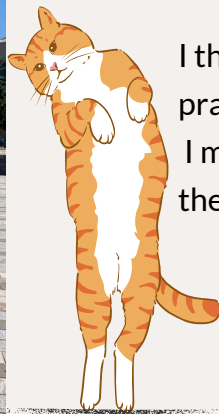


Photo credit Association ARBRES

So here's a 3rd statue, called LES FLÈCHES D'HÉRACLÈS..



Photo credit Fermat Science

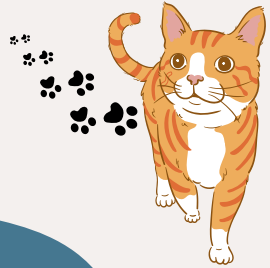


I think with a bit of practice, I might be able to match their size!



Step 4: The emblem of the royal era

Take the rue du Moustier to the left of the Espace Héraklès and walk to the Cathédrale Notre-Dame-de-l'Assomption.



Symbolising the Catholic victory over the rebellious former Protestant town, it was built on the town's highest point after the Wars of Religion.

To mark the presence of royal power and Catholicism, Louis XIV chose white stone and classical architecture that contrasted with the red bricks of the region.



Photo credit Fermat Science

Isn't it magnificent?

What majestic architecture! We can say that this old lady is very impressive!



The difference game:

Position yourself facing the cathedral. Imagine an axis of vertical axial symmetry and try to find the 4 principal difference present on the facade of the cathedral.

Now, I, Charlie, the king of the neighborhood, decree that it is time for a well-deserved break!

Because I have the impression that some of you need to recharge your batteries.

A little breather wouldn't hurt!



Ready to continue the adventure? Great

Place Franklin Roosevelt adjoins the cathedral, embellished with a small haven of greenery and a reflecting pool. Can you see it?



Volume calculation:

Calculate the volume of water needed to fill this water mirror.

Answer:

=>

Hint :

The formula to calculate volume is:

Volume = length x width x height

$V = L \times W \times H$

Continued clue:

The outer rectangle measures 18.20 m long and 10.20 m wide.

The raised interior rectangle measures 14.90 m long and 3.40 m wide.

The depth of the pool is 3 cm.

Allow me, friends, to extend my pause while you find the answer.

Hey that's life! And 9 lives it's tiring!



WOW how fast!!!

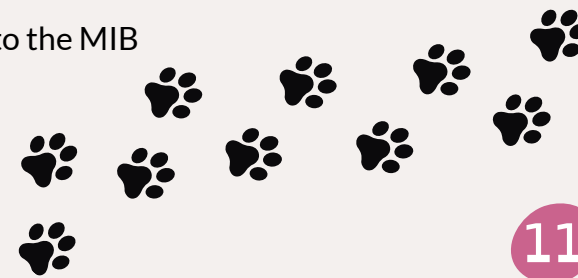


Just time for a little stretch for me...



Come on, here we go again, friends!

We will go down rue Notre Dame to the MIB (the Ingres Bourdelle Museum).



Step 5: It's art !

So here we are in front of the Museum, what a magnificent building!
It can be observed safely on the sidewalk opposite at the level of the steps.



Photo credit Fermat Science

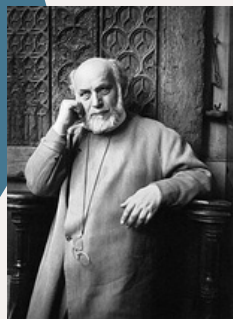
I like to sneak in there occasionally to observe the works.
And the view from the rooftops is simply breathtaking!

Besides, I remember the day of this photo; I was basking in the sun. 🐱



Ingres - Photo credit Flickr

This museum is in the place of the former 17th-century episcopal palace, which was subsequently transformed into a town hall during the French Revolution. The MIB notably offers the works of the two most illustrious artists from the city of Montauban:
Ingres and Bourdelle.



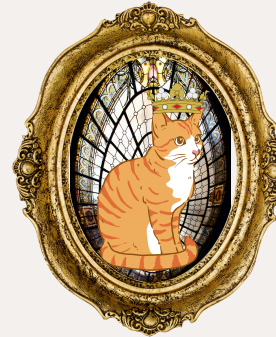
Bourdelle - Photo credit Wikipedia



Ha! Only good memories with them...



I have more than once gone out of my way so that they could train with a top model, you see...



Here are two examples.
You will notice that such beauty is relatively rare!



This is not new, you might say...

It was during my 7th life, it seems to me. 🐱



We also have something in common with Ingres and Bourdelle: all 3 natives of Montauban.



Crypto enigma:

Using the code PIG-PEN (next page), find the birth dates of the two Montalbanese artists highlighted in this museum.

Answer:

=>

Hint :

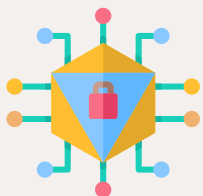
Using the PIG-PEN code encryption tables, replace the symbols with the letters to find the dates of birth.



Each number is written in full and separated by a hyphen.

Ingres : <□-V□7>-Π<Γ>-Α□ΠΕ

Bourdelle : <□-Π<Γ>-VΓ>-<□



A	B	C	J	K	L
D	E	F	M	N	O
G	H	I	P	Q	R
<div> <div>S</div> <div>T</div> <div>U</div> <div>V</div> </div>			<div> <div>W</div> <div>X</div> <div>Y</div> <div>Z</div> </div>		



Behind us is Square Piquard. A statue as a reference to the museum is present there.



Photo credit Fermat Science

This is a face statue, THE MASK OF BOURDELLE.

Have you happened to see where it is?

Now, I would like to take you to see one of the last medieval remains of the city.

Follow me!

Let's cross the road to join the sidewalk on the MIB side and turn right.

We'll go around the building to get there.



Step 6: A colossus with its feet in the water

There it is, the mastodon, it is the Pont Vieux. It spans the Tarn over a length of 205 meters.

I often take it to meet up with friends who live on the other side.

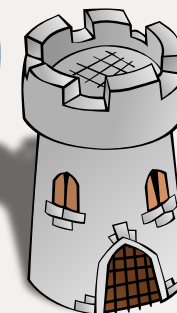


Photo credit Wikimedia commons



This bridge, which appears in the city's founding charter in 1144, was only completed around 1335.

Originally equipped with 3 towers, one of which included a chapel, it underwent numerous transformations over the centuries. It remains an essential crossing point in the town of Montauban.



Conversion:

The Tarn is a French river of the Massif Central and the Aquitaine Basin. It measures 37,500,000 cm long. It is a tributary of the right bank of the Garonne. How many km is it?

Answer:

=>

Let's cross the road again in front of the MIB to Square Piquard and take the Côte des Bonnetiers, which runs alongside it on the left. We will arrive in front of a monument, which is worth the detour...

Step 7: Occitan memory

Regarding old stones, the Saint-Jacques church surpasses all the other monuments in Montauban!

In fact, it is the oldest historical monument in the city. It is around 800 years old.



Photo credit Wikimedia commons

The Saint-Jacques church is a model of southern Gothic architecture of the Middle Ages. A vestige of the city, its construction went through several stages from the 13th through the 17th century to finally be completed in the 18th century. It bears on its facade the stigmata left by the cannonballs of the War of 1621.

Although I have seen it for centuries, I remain amazed by its beauty and the small details of its facade. It is almost as well preserved as me.



Calculation :

On the neo-Romanesque portal of the facade surmounted by a mosaic dating from the 19th century there is an arch made up of semi-circles...



Photo credit FERMAT Science

How many do you count?
How many circles is that?

Answer:

=>

You are really too fast for me!



Now I'm taking you to one of the locals' favourite places. This is **Place Nationale**. Take Rue Princesse to get there.

Well done friends!

Step 8: A lively place to live

Here it is! Isn't it magnificent?

I love this place; I always find something to fill me up whenever I feel a little peckish.





This square has not always had this name; take a look in one of the corners of the square to find the original one and note **the 8th letter**.



Located in the city's heart since the 12th century, this square has undergone several transformations following successive fires. From then on, its reconstruction was done in bricks and no longer in wood as at its origin.

It was a significant place for commercial exchanges and the expression of public life in general. Today, it still remains a very popular place for walkers.



A measurement :

Find the measuring stick at the square's entrance on the right. Read the directions on the sign.

Can you say how much you measure in Montalbanese cane?

Answer:

=>



In the centre of the square originally stood a fountain. Find one of its elements at the opposite corner from the old name of the place is located and note **the 7th letter**.




Calculation :

The number of arches located in this square is between 42 and 47. It is a prime number, meaning it only has two divisors, 1 and itself.

How many arcs are there?

Answer:

=>

Using the letters hidden in the clues marked with this symbol,  will you be able to find the first name of an emblematic figure of the city?



Bravo!!!!!!

De Gouges, from her last name, she was born in Montauban in 1748 and guillotined during the French Revolution in Paris in 1793.

Considered the French pioneer of feminism, she is best known for her Declaration of the rights of women and the female citizen.

A commemorative plaque is located in the street of her birthplace, rue Fraîche, not far from Place Nationale. Can you find it?

There you have it; the walk ends here...It was a pleasure to show you my city.

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

