



VISIT MATH

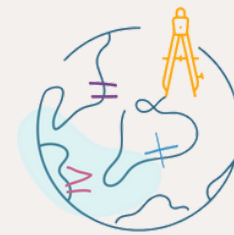


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Itinerary



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| 1 St Bavo's Cathedral | 5 St Nicholas' Church |
| 2 Belfry | 6 St Michael's Bridge |
| 3 City Pavilion | 7 Korenlei |
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VisitMath Tours GHENT



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Welcome to the charming city of Ghent!
Today, we will discover the Historical City Centre together.
Are you all set?
Let's go exploring this enchanting city!

Step 1: Starting point

It all begins at St Bavo's Cathedral.



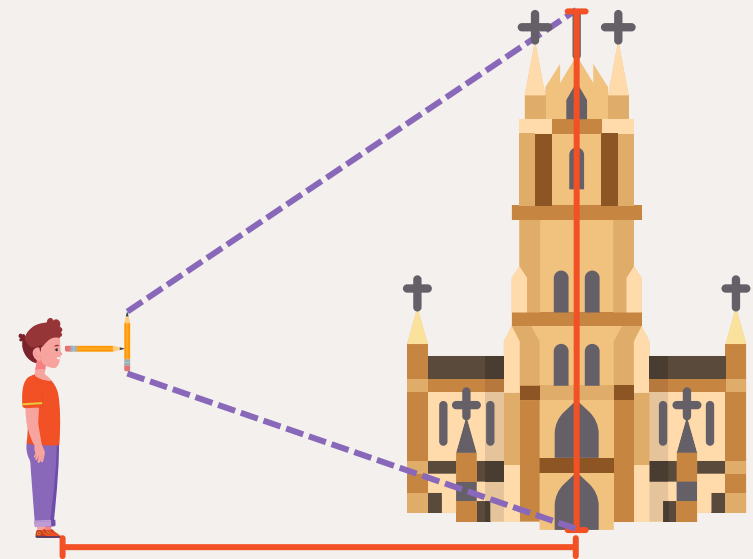
St Bavo's Cathedral traces its origins to a 10th-century church and a 12th-century Romanesque structure dedicated to St John the Baptist. During the prosperous Middle Ages, Ghent commissioned larger and more luxurious churches, leading in 1559 to the conversion of the Church of St John into a grand Gothic St Bavo's Cathedral, coinciding with the church becoming the seat of the Chapter of St Bavo. The same year, it became the Cathedral for the Bishops of Ghent.

Estimate the height of the tower. Try to be as precise as possible.

How to estimate the height?

1. Take two straight sticks of the same size. You can use pencils, for example.
2. Place the first in a horizontal position in line with your eyes and the second vertically and perpendicular to the 1st.
3. Stand facing the tower at a distance approximately equal to its height.
4. Then, move forward or backwards and slide the vertical stick so it coincides with the size of the tower.
The tower's base should correspond to the bottom of the vertical stick.
The top of the tower should correspond to the top of the vertical stick.
5. When the two ends of the tower correspond to the ends of the vertical stick, **measure the distance separating you from the tower with steps.**
The tower's height equals the distance between you and the tower.

→ One "normal" step = +- 60 cm





How high is the tower?

Now, you are able to estimate heights with nearly no material!

Impressive, isn't it?

Don't hesitate to enter the Cathedral to admire all its treasures.



The St Bavo's Cathedral is home to the renowned "Ghent Altarpiece", also known as "The Adoration of the Mystic Lamb". This masterpiece was painted by the Van Eyck brothers in 1432 and comprises 18 panels depicting biblical scenes and portraits of the commissioners. The altarpiece had a tumultuous history, surviving many events.



During World War II, the painting was taken to a salt mine in Austria, where Hitler hid numerous art treasures. At the end of the war, Hitler ordered the salt mine to be blown up, but a few heroic miners, known as the "Monuments Men", rescued the "Ghent Altarpiece", averting a major disaster in art history!



Let's move on to our next step!

But wait... What is this afar? Is that fire?



Get closer to the Belfry to see what's going on!

Step 2: Dragon's kingdom



The dragon on top of the Belfry breathes fire!



The fiery dragon, the symbol of Ghent, watches over the city's historic heart from the Ghent Belfry, a UNESCO World Heritage site. In 1402, the Belfry housed the city privileges in a chest, secured in its safe. The dragon, present since 1377, serves as a symbolic guardian. St Nicholas' Church was the main watchtower until 1442 when the watchmen and bell ringers moved to the Belfry you can see today.

The dragon keeps on breathing fire! If it goes on, the entire city might be reduced to ashes...

There is a lot of smoke coming from the other side of the city.

It seems like the Castle is on fire!



How many metres away is the fire (as the crow flies)?

Use the map to find the answer:



Now run and take shelter under the City Pavilion.



Step 3: Finding shelter



The City Pavilion is a modern building in the city centre. This multifunctional venue is suitable for hosting concerts, dance performances, and markets, among others.

The roof is adorned with approximately 3000 glass tiles to shield the wood from the elements. Working on the assumption that one rectangle glass is 60cm by 1m...



What is the total area covered by the 3000 glasses?

Great job! 💪

But don't forget that a fire is devastating the city!



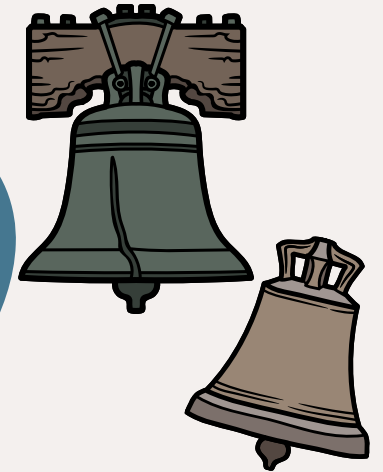
Head to the Roeland Bell to warn people near the Castle that you are on your way to save them!

Step 4: Ring the bells!

The sound of the bell should soon be echoing across the city.



Named "The Triumphant" or "Roeland Bell", it has been in Ghent since 1314 and was initially inside the Belfry. In 1914, it suffered a crack and was subsequently taken down from the Belfry.



Knowing that the sound speed is 1235 km/h and using the distance separating the Belfry and the Castle you calculated at step 2...



How long will it take for people in the Castle to hear the fire alarm from the bell?

That's fast! 😮



Move away and hide from the dragon in Korenmarkt's square.

Step 5: Historic square

You should be safe for a moment here!



Nearly 1000 years ago, Korenmarkt served as the hub for grain trade, which was arriving from the Scheldt and Lys rivers into the city. The square was an economic centre during the Middle Ages. Later, it was the heart of mail coaches that led to the construction of the post office building in the early 20th century.

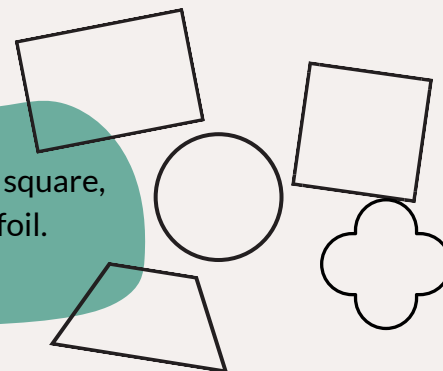


Opposite to it stands the St. Nicholas Church, an iconic landmark in Ghent. Its construction started in the early 13th century to replace an earlier Romanesque church. The edifice took shape over the remaining years of the century in the distinctive local Scheldt Gothic style, named after the adjacent river.

Have a closer look at the post office building.
Here is a picture of it:



Find at least one circle, triangle, square, rectangle, trapezoid and quatrefoil.



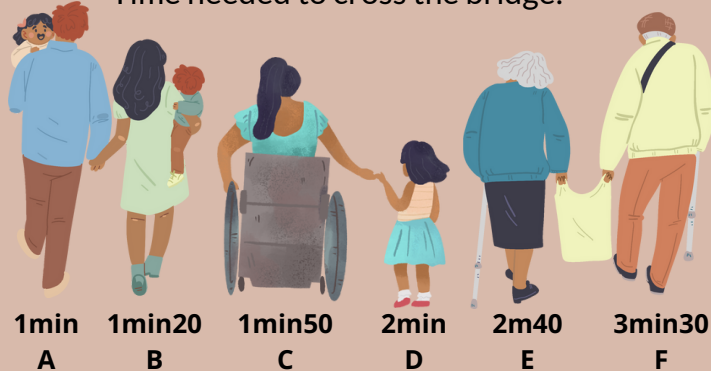
Once you are done, head towards the bridge on the left of the building.

Step 6: On the other side

As you want to help the people in the Castle, you want to get there as fast as possible.

- 6 people have to cross a bridge as quickly as possible.
- Due to some repairs, the bridge can only support the weight of two people at a time.
- It's night, and crossing the bridge without a torch is impossible.
- There is only one torch.
- Each person has a maximum speed:

Time needed to cross the bridge:



What is the minimum time needed to get everyone across?



You made it to the other side of the bridge!
All this water might be helpful to stop the fire.



Go on the bank of the river.

Step 7: Rescuers

You now stand on the "Korenlei" and face the "Graslei".



The Korenlei ("Wheat Quay") is located directly opposite the Graslei ("Grass Quay"), with the Lys River in between. The whole formed the centre of Ghent's port from the 11th to the 18th century.



A fire-fighting plane, with a capacity of 7500 litres, is trying to extinguish the fire at the Castle by drawing water from the river.

7 drops are needed to extinguish the fire.



Calculate the quantity of water in m³ released by the water bomber to extinguish the fire.



Go to the Castle to see the damage.

Step 8: Safe and sound

Phew! It's not as bad as I imagined.
It's all thanks to you!

The Castle of the Counts is the last medieval Castle in the region, with a moat and intact defences. Originating from Roman times and briefly under Viking plundering, the Counts of Flanders then transformed it into a stone keep in the Middle Ages.



After being sold and used as a factory complex in the late 18th century, it fell into disrepair and faced demolition. The restoration turned it into a famous tourist site, losing its association with abuse of power and becoming a symbol of historical significance in Ghent.



The entrance to the Castle is completely blocked. To enter, use one of the ladders left by the fire brigade to climb over the wall.

The wall (built perpendicular to the ground) is 5m high. The ground around the Castle is still hot from the fire, so be careful not to step on it! Leave 3.5m between the wall and the bottom of the ladder to make sure you don't get burnt.

What is the minimum length for the ladder to reach the wall?

Hopefully, the fire did not damage the Castle much, and everyone could escape it! The dragon stopped breathing fire and returned to the Belfry!

**Well
DONE**