MathCityMap

Mathematical walk in Hellín - Una posible solución

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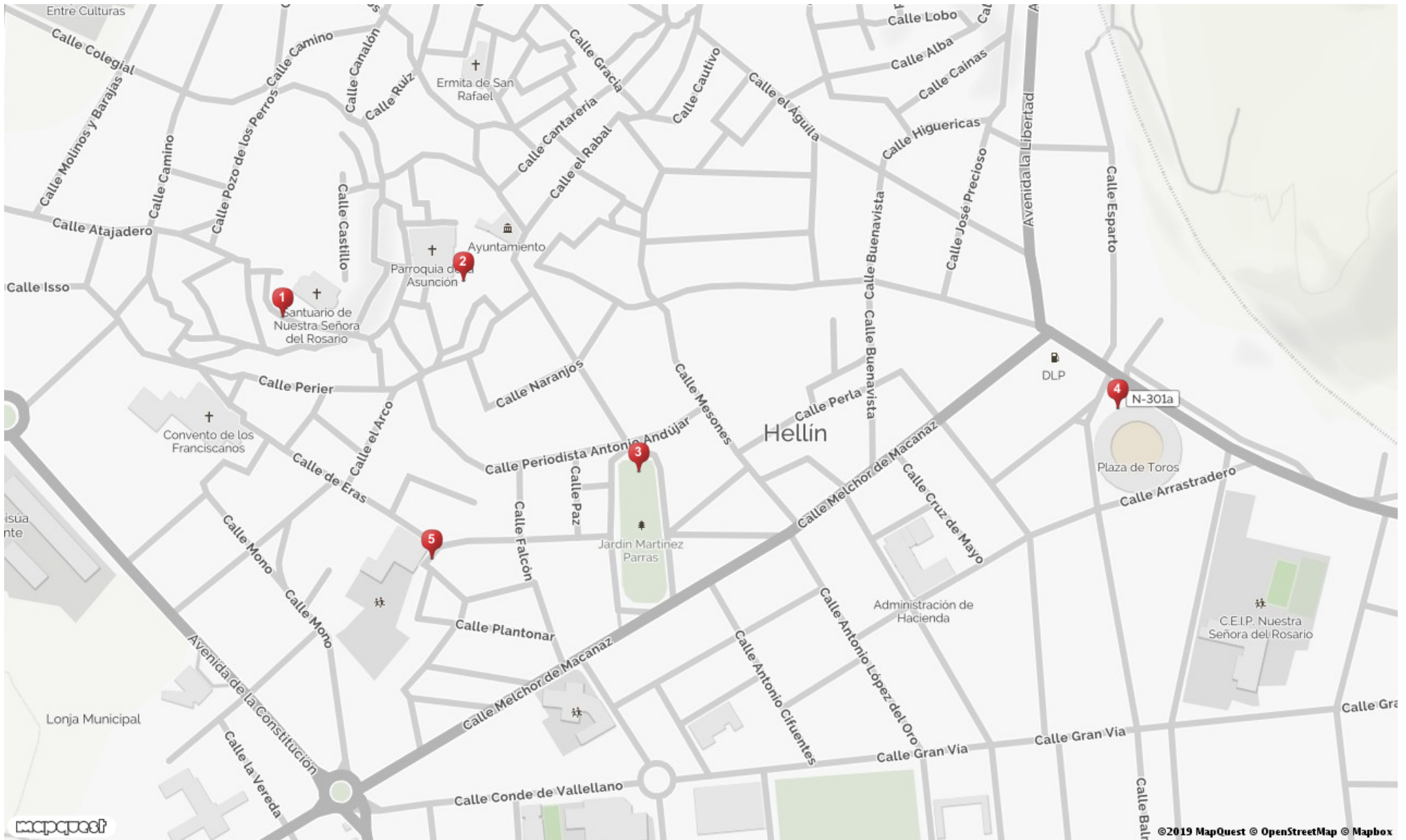

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Información sobre esta ruta

Número de tareas.:	5
Duración aproximada:	~ 01 h 20 min
Longitud:	~ 1.4 km
Recomendado por la clase:	13
Herramientas recomendadas:	• Calculadora
Etiquetas:	Área, Rectángulo, Unidades, sucesiones, Número, Geometría, Círculo, Área, Medida, Polígono

1. Tarea: Kiss passage

Kiss passage is the narrowest street in Hellín. Make an estimation about the greatest number of people that could be inside this street at the same time

Respuesta:

50   62

Una posible solución:

The area of the passage is about 14 square metres, considering that the maximun number of people in one square metre is 4 people, then 14 times 4 is 56
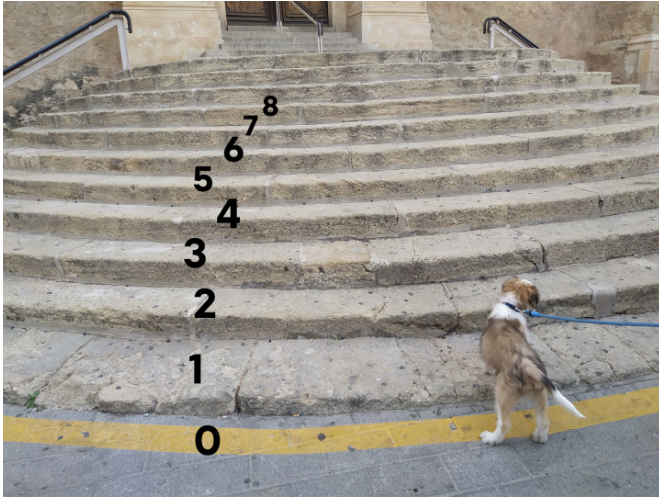
Sugerencia 1

Try to estimate the area of the passage in square metres

Sugerencia 2

How many people fit in one square metre?

Sugerencia 3

2. Tarea: Church square

Imagine that the steps in the stairs have been numbered, given number 0 to the groung level, number 1 to the first step, number 2 to the second and so on. The last one is the one on the platform (do not count the small stairs at the main door of the church). A bored student decided to do the following: First: He started to climb the stairs, went up step number 1 and then went down. Second He climbed uptp step number 2 and went down. Third: He climbed upstep number 3 and went down, And so on. The question is: How many steps did he climb in total (up and down)? (DO NOT COUNT STEP NUMBER 0)

Respuesta:

121

Una posible solución:

The stairs have got 11 steps. The first time he climbed 1 step. The second time he climbed 3 steps The third time: 5. So it is an arithmetic sequence 1,3,5,7... whose difference is 2. Applying the formula of the sum the total is 121 steps

Sugerencia 1

how many steps are use the first time?and the second? and the third? Do you remember how to add an arithmetic sequence?

Sugerencia 2

Enlace al video: https://www.youtube.com/watch?v=UepJT8vT0YY

Sugerencia 3

You also can use your calculator and add all of them, since thay are only eleven terms

3. Tarea: The drummer monument

Look at the sculpture, in one of the drums you can see a date (written with two digits), this date is a year of the 20th century. Imagine now that it os a very ancient statue and that it was erected in the 13th century. What was the year? (use 4 digits)

Respuesta:

1275

Una posible solución:

The two digits number is 75. This year in the 13th century was 1275

Sugerencia 1

Look at the adult. Can you see a number? Do you know what is the beginning for the years in each century?

Sugerencia 2

Now it is the 21st century , this year is 2019. What operation do you have to do for knowing the beginning of a date in 21st century? And in the 13th century?

Sugerencia 3

4. Tarea: The bullring

The bullring was built between 1860 and 1862. The outer part is a 32 sides polygon, but inside it is a circle. First: Enter into the bullring and count the number of steps along the circumference Second: Convert them into centimetres (one step is about 65 centimetres) Third: calculate the area of the circle in square metres

Respuesta:

1200   2000

Una posible solución:

The area is about 1662 square metres

Sugerencia 1

Do you know the formula of the area of a circle? and the measure of the circumference?

Sugerencia 2

If you know the circumference , try to calculate the radius and then the area

Sugerencia 3

5. Tarea: The numerical street

What is the number of our numerical street? Call it N and solve this exercise: N houses have N cats living in,each cat eats N mice, each mouse,if not eaten, would eat N ears of wheat. How many ears of wheat could be eaten if the mice wouldn't have eaten by the cats?

Respuesta:

2401

Una posible solución:

The number is 7, and you have to calculate 7x7x7x7

Sugerencia 1

Calculate first the number of cats

Sugerencia 2

Calculate second the number of mice

Sugerencia 3

Finally calculate the number of ears of wheat