

PROBLEM SOLVING BOOKLET

Date: _____

To preserve the anonymity of your identity but to be able to identify your production, we need you to complete the following code: use the first three boxes to put your initials (first name and two surnames, if your name is Ana López García, put ALG). Then put the letter that identifies your group:

			3	M	A	G
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The data collected in this booklet will be treated confidentially and used exclusively for academic purposes, which will help us to advance our research within the framework of the project PID2021-126707NB-I00 funded by MICIU/AEI/10.13039/501100011033 and by “ERDF A way of making Europe”.

Now it's problem-solving time!

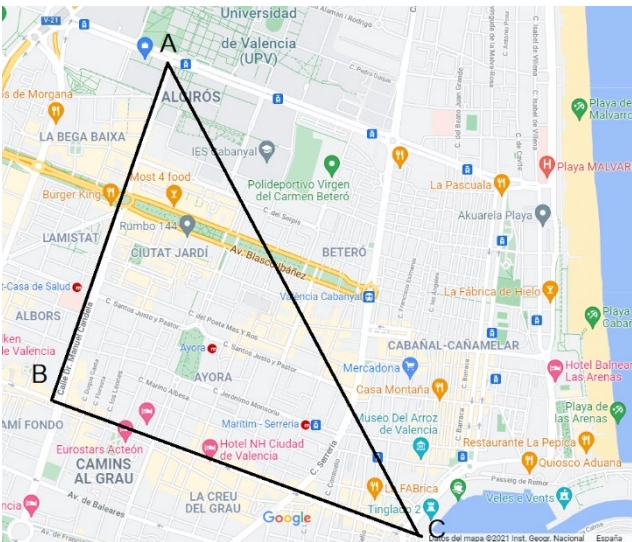
Below, you will find 3 problems whose statement is formulated in a context (real or figurative). Try to solve them, indicating in detail the resolution process. You can use a calculator. Next, answer honestly the questions related to affective aspects.

Thank you!

Problem 1: Human chain against port expansion

As you know, the Valencia City Council has planned an expansion of the port which will allow a growth in the import and export of goods but which, according to various reports, will also lead to serious ecological damage in the mid and long term. The students of the Facultat de Magisteri, organised through the student syndicates, have organised a mobilisation to draw the attention of the public to the risks of the extension of the port of Valencia.

To this end, a human chain will link the Facultat de Magisteri with the northern part of the port via two busy avenues: Manuel Candela and Avenida del Puerto. Thus, the human chain will cover the sides AB and BC of the triangle that you can see in the following image.



Knowing that in the Facultat de Magisteri there is a total of 3511 students enrolled in one of the two degrees, that the distance of the route in Manuel Candela is 1.65km and that the distance in a straight line from the Facultat de Magisteri (A) to the port (C) is 2.5 km, try to find out if it will be possible to form a human chain with the students participating in the mobilisation.

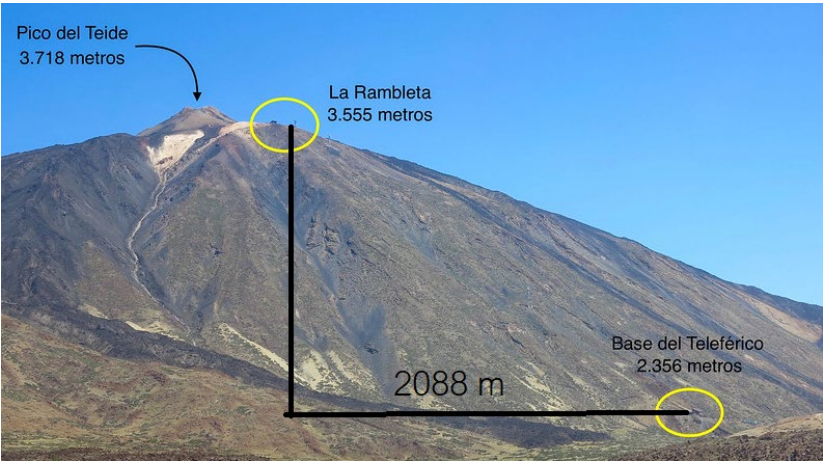
Use this space to write down your solution

	Not true					Very true				
1. I'm sure that I solved the problem correctly	1	2	3	4	5					
2. I found it interesting to solve this problem	1	2	3	4	5					
3. I think it's important to be able to solve problems based on situations like this	1	2	3	4	5					

Problem 2: Teide cable car

The cable of the Teide cable car needs to be replaced. Each metre of cable costs 8 €. What is the approximate cost of replacing the current cable? Explain your solution in detail.

The Teide cable car is located in the Teide National Park in Tenerife (Canary Islands) and is the highest cable car in Spain. It ascends from the base station, located at 2356 metres above sea level on the slopes of Mount Teide, to the La Rambleta station at 3555 metres above sea level and only 163 m from the summit of the volcano, overcoming a drop of 1199 m. The journey takes between eight and ten minutes. The ride lasts between eight and ten minutes at a maximum speed of 8 m/sec. The cabins can accommodate 44 people.

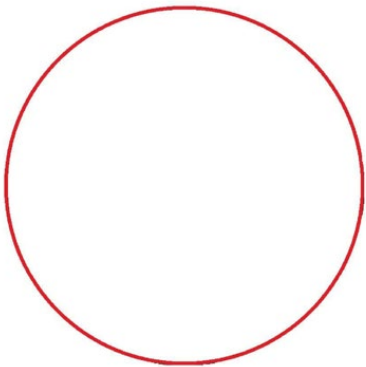


Use this space to write down your solution

	Not true					Very true				
1. I'm sure that I solved the problem correctly	1	2	3	4	5					
2. I found it interesting to solve this problem	1	2	3	4	5					
3. I think it's important to be able to solve problems based on situations like this	1	2	3	4	5					

Problem 3: Cut-off square

Here is an image of a visual poem. Look at it carefully and answer the questions below.



Cuadrado truncado

ALL

Use this space to write down your solution

	Not true					Very true				
1.	I'm sure that I solved the problem correctly	1	2	3	4	5				
2.	I found it interesting to solve this problem	1	2	3	4	5				
3.	I think it's important to be able to solve problems based on situations like this	1	2	3	4	5				