2nd term Project
4º ESO

Find the depth to which a ship was sunk off the Gijón coast. A few seconds before sinking two measurements were taken:
1.- The Bankunión building was observed with an angle of elevation of
            1 ° 54 '24.27''.
2.- The Providence top was observed with an angle of elevation of
            1 ° 42' 06.09''.

TIPS:
- It can be done in pairs.

- You can use the free 1:50.000 topographic map of Gijon from The National Geographic Institute website. In the section "Map Library"(=cartoteca). Just in case I also write the link to download the map: http://www.ign.es/imgmtn50/A1/500142002cnn.pdf .
  You don't need to print the whole map, just select, cut and print the part that interests you. You can make the drawings you want on it.

- You can use as well the street map of Gijón (free from Gijón cityhall website).

- The baseline of the Bankunion building is 2 meters over the sea level.

- It will count in your mark the mathematical calculation of the height of the building by some practical or theoretical method. Ask me if you don't know how.

- Your final mark in this project will be decreased if you take the data of the height of the Bankunión building from the internet.

- The Providencia hill height is on the map.

- Maps from "Google maps" are allowed, but be careful with scales.

- It is assumed that the slope of depth sea lines on the map is a straight line. The depth from one "depth line" to another one is gradual. (In case of doubt you can ask).

- You can draw on the map (pen, compass, etc) in order to do some kind of calculation, then take a photo to add to the project.

- Be careful with scales.

The project should be explained in no more than five pages, including the maps and drawings that you might use. Sometimes you must include an image or the mathematical calculations you did. It must include at least the following points:

a) Height of the "Providencia" (mathematical calculations and / or image where you find it or calculate it).
b) Height of the "Bankunión" Building (mathematical calculations and / or image where you find it or calculate it).
c) Calculation of the sinking point and explanation of how you have done it (mathematical calculations and an image or drawing).
d) Calculation of the depth at which the ship is sunk (mathematical calculations and / or image where you find it or calculate it).
e) Author names, course, year, etc
f) References (Maps, books, websites, etc)

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