

Midterm

Maps of the New world

- 1) In Virreinato 2.
- 2) In Virreinato 3.
- 3) In Virreinato 1.
- 4) It was observed in Mexico City, Nueva España (Virreinato 2).
- 5) La Condamine's expedition went to Quito (Virreinato 3),
viceroyalty of Peru (Virreinato 1), New Spain (Virreinato 2), and
Santa Fe de Bogotá (Virreinato 3).
- 6) The Expedicion Botanica of Jose Celestino Mutis took place in
Nueva Granada (Virreinato 3).
- 7) Jose celestino Mutis took place in Nueva Granada (Virreinato 3).
El Colegio de Rosario was located in Santa Fe de Bogotá.
- 8) The Pierre Auger Observatory is located in Argentina, which
was in Virreinato 4.

Asynchronous Activity Review

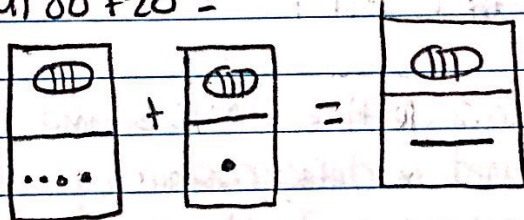
- 1) The physics detector shown in fig. 2 (left) is HAWC Gamma Ray Observatory. HAWC was designed to detect cosmic rays and gamma rays from Astrophysical sources. In this method, named "Water Cherenkov Technique", an artificial body of water is used to sample the charged particles created in the air showers produced by TeV gamma rays.
- 2) The Mexican City located in the figure 2 (right) is Real de Catorce. The significance of these Mexican Cities in the context of the development of colleges and the scientific community in 18th Century Mexico was these cities were rich with silver. By these cities being rich in silver, this led to the discovery of silver and this helped develop colleges to help with it. This helped fuel the development of colleges because these colleges were made to teach others how to mine silver and taught others chemistry that was needed so you can smelt the silver.

With these new colleges teaching others how to mine and about chemistry, it helped fuel the extraction of silver in these cities.

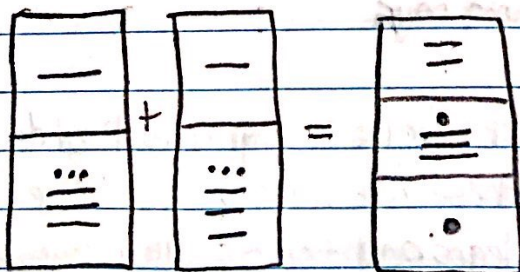
- 3) The City that is being shown is Potosi. It is located in Bolivia and the significance of this city for international trade was it is famous for its, "large pile of silver, cerro rico", which is located in Potosi. For international trade, it is famous for its large abundance of silver used in trading. It was controlled by the Viceroyalty of Peru because it was in Bolivia. They would send boats that would have to go all the way around Southern America to reach Africa and Europe in trade...

A synchronous Activity Review II

1) a) $80 + 20 =$



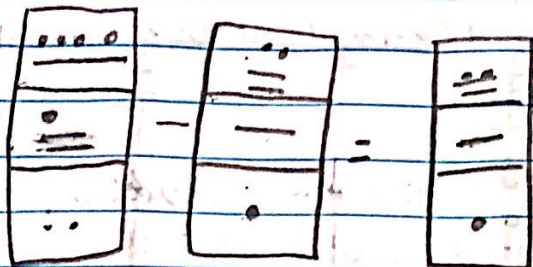
b) $365 + 365 =$



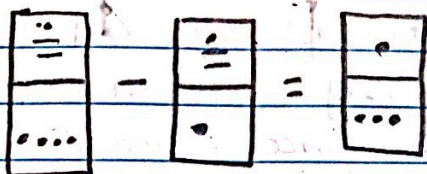
c) $1024 + 512 =$



2) a) $1024 - 512 =$

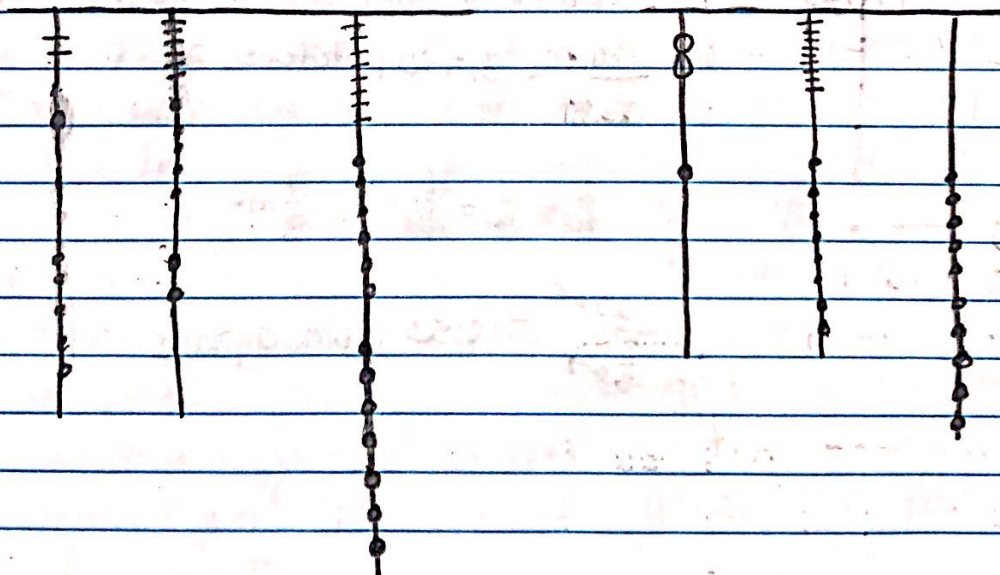


b) $92 - 31 =$

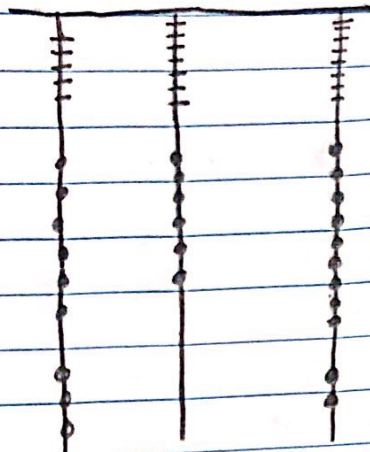


3) a) $512 + 256 =$

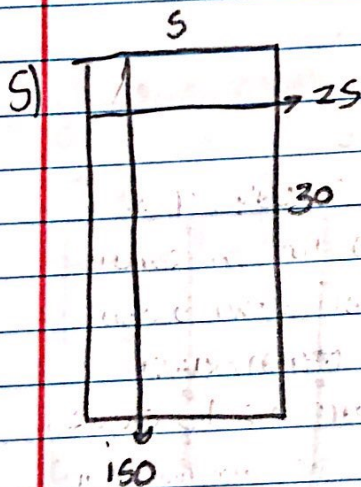
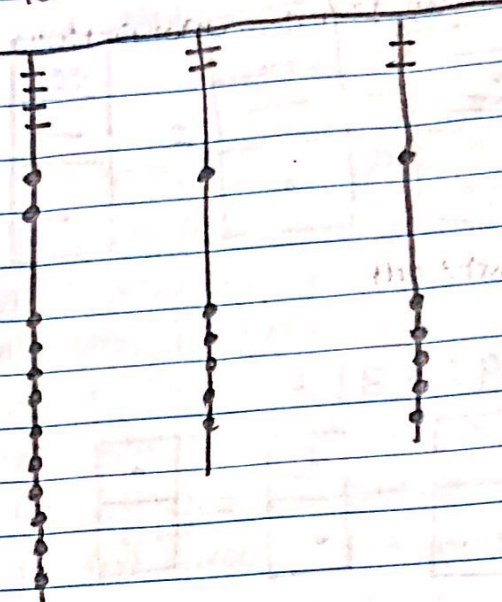
b) $11 + 89 =$



4) a) 365-67



b) 1024 - 512 =



$30 \times 5 = 150 \text{ m}^2 \text{ total Area}$

$$\frac{1}{5} \times \frac{1}{5} = \frac{1}{25} \text{ m}^2$$

$$\frac{150 \text{ m}^2}{\frac{1}{25} \text{ m}^2} = 3,750 \text{ potatoes.}$$

$$\frac{2}{10} \times \frac{3}{10} = \frac{6}{100} \text{ m}^2 = \frac{3}{50} \text{ m}^2$$

$$\frac{150 \text{ m}^2}{\frac{3}{50} \text{ m}^2} = 250 \text{ quinoa plants}$$

Connection to Physics

- 1) C: The Pierre Auger observatory.
- 2) C
- 3) A
- 4) A

Vocabulary

- 1) A
- 2) C
- 3) D
- 4) B
- 5) B
- 6) D

Free Response Section

- 1) In the vice Royalties of Peru and Nueva España, there were colleges that taught about mining and different sciences. These universities were Escuela de minas, Jardín Botánico, and Colegio de Cirugía. Many universities had teachings of mining and chemistry to help contribute to the smelting of silver in Peru and Nueva Granada. However, in Nueva Granada, they started to teach about Newtonian physics and philosophy. They also taught Copernican teachings. During these times, the Jesuits were the first to teach the theories of Descartes, Copernicus, and Newton at the universities of the viceroyalty of New Granada.

2) The significance of the *auroa borealis* was that it was a rare, spectacular display of multicolored in the sky associated with solar flare activity. In 1789, it was, "at night the northern lights were very red with fiery beams spreading over the heavens. The significance of this was scientists realized what was causing all of this, as the protons and electrons from the solar wind hit the particles in the Earth's Atmosphere they release energy that causes the Northern lights.

3) The four humors is a medieval theory of medicine based on four classes of fluids within the body. Each had an associated color. Each color had a temperature classification, and a moisture classification. Medieval schools took it a step further and tried to associated them to fundamental elements, based on the idea that we consume them to live, Hot/Cold, moist/dry. These helped influence indigenous treatments but they did not always fit. For example, cacao was described as cold and dry, and chocolate was warm and damp. They used this system in indigenous treatments because it helped figure out the causes of sicknesses and how to treat them. For example, for Diarrhea, they learned herbal ingredients helped stop the acid inside of your stomach.

4) a) Voltaire and Rousseau stating that you do not need authority to help you understand the world, which were banned by Catholics because they did not want people to revolt.

b) Indigenous treatments were destroyed by the Catholics because they wanted people to follow their knowledge.

c) Alzate is priest in the Church and Catholics take away his Journals.

d) Nahuatl medicine translated to Spanish by Jesuit priest.