STUDENT INFO

*All info should be provided **in English**. Please use **CAPITAL LETTERS***

Country:

City: *Name the City e.g. **ATHENS***

School: *School Name e.g. **2ND HIGH SCHOOL OF ATHENS***

Teacher: *Teachers Name e.g. **GEORGE PAPPAS***

Student: *This ID is unique for every student and will be used in the pre- and post-tests. It consists of the day of the month the student was born, the first two letters of the student's Name and the first three letters of his/her Surname. For the student YANNIS DOUMAS born on the 14th of a specific month the ID would be: **14YADOU***

Test: *Pre-test or Post-test*

Assuming that the sunlight comes from a very long distance away, Eratosthenes experiment can be the basis to prove that:

a) the Earth is a sphere b) the Earth is not flat

c) the Earth rotates around itself d) the Earth rotates around the sun

Eratosthenes experiment was originally performed

a) on the 20th of March during the spring equinox

b) on the 21st of June during the summer solstice

c) at the time of the year when the length of day and night are equal

d) around the hottest days of the summer

If Eratosthenes lived in Europe then would he be able to see the image of the sun in the bottom of the well as he did in Syene? If yes, when or where would he observe that?

a) No, he wouldn't be able to see the image of the sun in the bottom of a well

b) Yes, he would have seen the image of the sun in the bottom of a well if he lived near the North Pole

c) Yes, he would have seen the image of the sun in the bottom of a well if he made his observation on March 20th

d) Yes, he would have seen the image of the sun in the bottom of a well if he made his observation at a place (in Europe) that has the same longitude as Syene.

If the sun rays are considered parallel when reaching the Earth then during the winter solstice (21/12) they are

a) perpendicular to the ground during local noon at any location on the Tropical of Sagittarius

b) perpendicular to the ground during local noon at any location on the Tropical of Cancer

c) perpendicular to the ground during local noon at any location on the Equator

d) perpendicular to the ground during local noon at the South and North Pole

Two cities on the same longitude

a) will have a local noon at the same time only if they both are on the same hemisphere
b) will have a local noon at the same time
c) will have a different local noon depending if they are in the north or south hemisphere
d) will have different local noon depending on the season at that location

If I place a 1m stick at two different locations on the same latitude then

a) they will have the same shadow length at local noon measured on the same day
b) they will have different shadow length at local noon depending on their longitude
c) they will have the different shadow length at local noon measured on the same day
d) they will have the same shadow length at local noon measured only on 20^{th} of March

If we place one car (assuming that the approximate length of a car is 4m) behind another along the Earth's circumference we will end up using

a) 1 million cars
b) 10 million cars
c) 100 million cars
d) 1 billion cars

Two people decide to measure the shadow length of a 1m stick at local noon. One person performs the experiment during the spring equinox (20/3) and the other during the autumn equinox (21/9). After that they decide to share their data. Can they measure the Earth's circumference?

a) Yes, as long as they are on the same longitude and know the distance between their two locations
b) No, because they have made their measurement at different times and the earth is not at the position it used to be
c) Yes, as long as they are on the same location
d) No, except if they are both on the equator at different locations and know the distance between these locations

If your school has the option of matching with another school on the same longitude in order to exchange data and perform Eratosthenes experiment on 20/3, what matching school would you prefer so to minimize the error on your calculations

a) a school that is very far from yours so the distance between the two schools corresponds to a greater central angle measured more accurately
b) a school that is very close to yours so the distance between the two schools is not large and thus can be measured with greater accuracy
c) it doesn't matter as long as both schools share the same longitude
d) a school that is as close as possible to equator because its stick shadow will be very small and thus it can be measured with greater accuracy