

Azterketarako galderen ereduak

Eredua #01

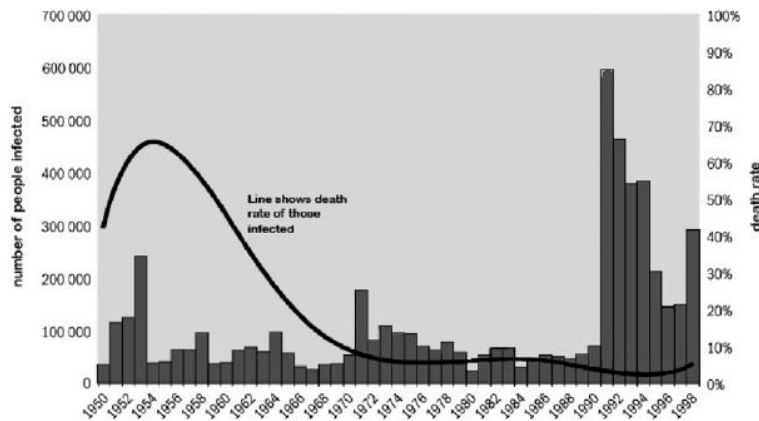
Hemen grafiko konplexua (Y ardatzean bi datu-mota) aurkezten da (gaixotasun bati buruz) eta galderak egiten dira.

Galdera batzuk grafikoaren erlazionaturik daude eta beste batzuk teorikoak (kontestuan) dira.

1 Cholera is a serious infection of the digestive tract. Symptoms include diarrhoea. It is one of many infectious diseases that are transmitted in drinking water.

Figure 1 shows trends in the number of cholera cases in the world since 1950.

Figure 1



Cholera, reported number of people infected and death rates of those infected, 1950-1998

(a) Explain what is meant by an infectious disease.

.....
.....

(2 marks)

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(a) During treatment for thyroid cancer the patient is given a drink containing a radioactive isotope of iodine. In the body, iodine concentrates in the thyroid. The radioactive iodine has a half-life of 8 days and emits beta and gamma radiation. Before the treatment patients are given the following information about what to expect.

- The doctors and staff on the ward will only stay in your room for short periods at a time.
- Visitors will be restricted and only allowed to stay in the room for a short time, if at all. Visitors will be able to talk to you from outside the room through an intercom.
- An instrument called a Geiger counter can be used to monitor the level of radiation in the room.
- Children and women who are pregnant will not be allowed to visit.

(i) Ionising radiation can harm living cells. Explain in what way the radiation damages cells.

.....
.....

(2 marks)

(ii) Explain the reasons for the restrictions on visitors.

.....
.....

(2 marks)

Eredua #02

Tratamendu bati buruzko deskribapen testuala dago.

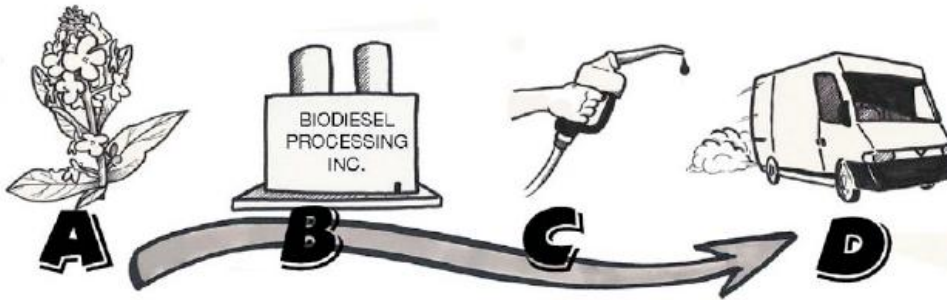
Jarraian, galdera batzuk, guztiak testuari buruz:

- testuan dagoena
- testuan dagoenatik abiatuz ondoriozta daitekeena

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Biodiesel, can be made from plant oils as an alternative to fossil fuel diesel. Biodiesel can be burned in normal diesel engines. **Figure 2** summarises the whole process.

Figure 2



(a) (i) Where does the energy for plant growth come from?

.....
(1 mark)

(ii) What has happened to all this energy after stage D?

.....
(1 mark)

(iii) Explain why biodiesel is a renewable fuel.

.....
.....

(2 marks)

Eredua #03

Eskema grafiko baten inguruan galderak agertzen dira.

Galdera batzuk grafikoari buruzkoak dira zuzen eta beste batzuk kontestualizatuak, teorikoagoak.

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In 1915 Einstein used his theory of General Relativity to try to understand what the cosmos was like. His calculations led to the conclusion that the universe could not be stable; it should be either expanding or collapsing. As Einstein believed the universe was stable, he modified his equations to produce that result. He thought he was improving his theory, to make it match better to reality – but he later described this as 'the biggest blunder of my life'.

In 1929, the American astronomer Edwin Hubble made measurements that allowed him to estimate the speed at which galaxies were moving away from the Earth. His calculations indicated that the further away a galaxy was, the faster it was moving away from us. This implied that the universe was expanding. Hubble and other astronomers proposed that the universe had originated in a 'Big Bang'.

Some other astronomers were not convinced. Their research led them to think that matter was distributed uniformly throughout the universe – and did not get more spread out with time. They proposed an alternative theory, the Steady State theory, which proposed that matter was constantly being produced to keep the average density of the universe constant as it expanded.

By the 1950s there were still two competing theories on the origin of the universe: the Big Bang theory and the Steady State theory. One of the predictions of the Big Bang theory was that radiation produced in the Big Bang should still be detectable. This radiation was found in 1964 by Penzias and Wilson. This is one of the reasons why most astronomers now accept the Big Bang theory.

(a) Explain briefly what is meant by the Big Bang theory.

.....
.....
.....

(2 marks)

(b) From the account above briefly identify an example of each of the following

(i) An observation

.....

(1 mark)

(ii) A correlation between two variables

Eredua #04

Testu baten deskribapena. Testua zientziaren historiaren ingurukoa dela esan daiteke.

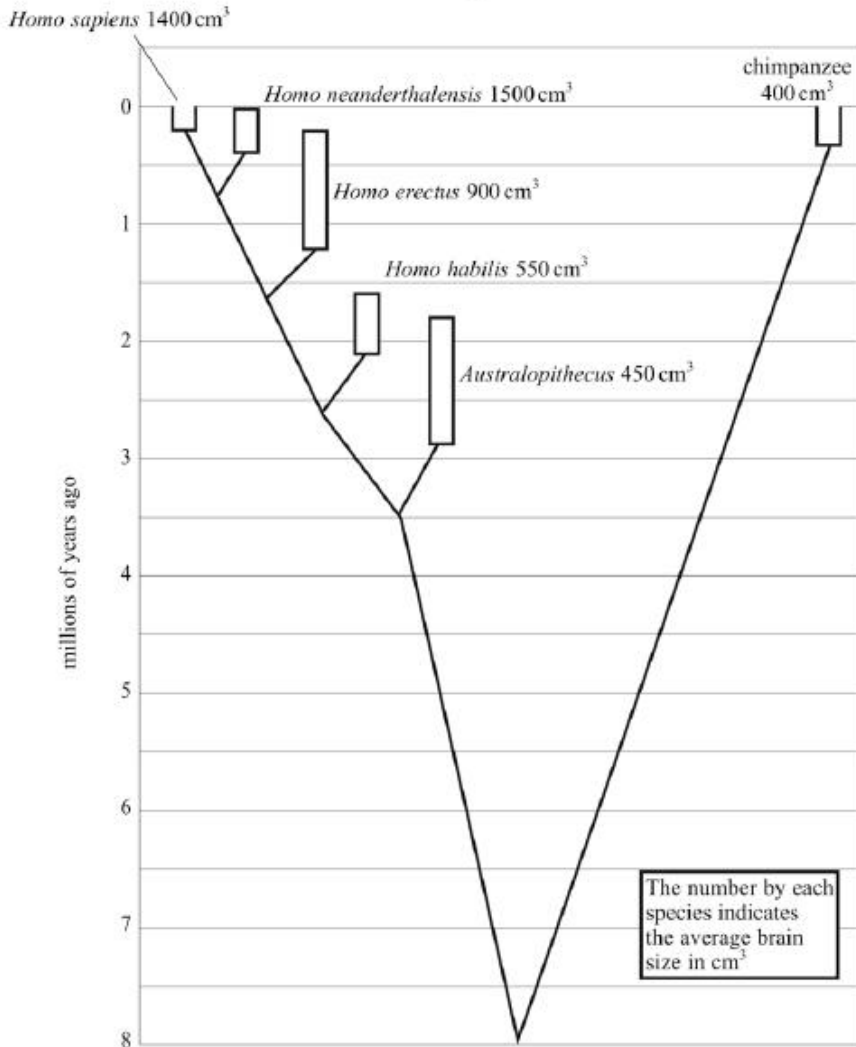
Egin behar dena:

- Teoriaren azalpena
- Metodo zientifikoaren urratsen identifikazioa
- ...

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- 7 Humans and chimpanzees are both primates. Many other primate species are now extinct. **Figure 4** shows one suggested relationship between modern humans, some of the other extinct human-like species and chimpanzees. The number by each species indicates the average brain size in cm^3 .

Figure 4



Eredua #05

Grafiko baten interpretazioa, eboluzioaren esparruan

Galderak:

- Grafikoaren ezaugarri batzuk identifikatu
- ...