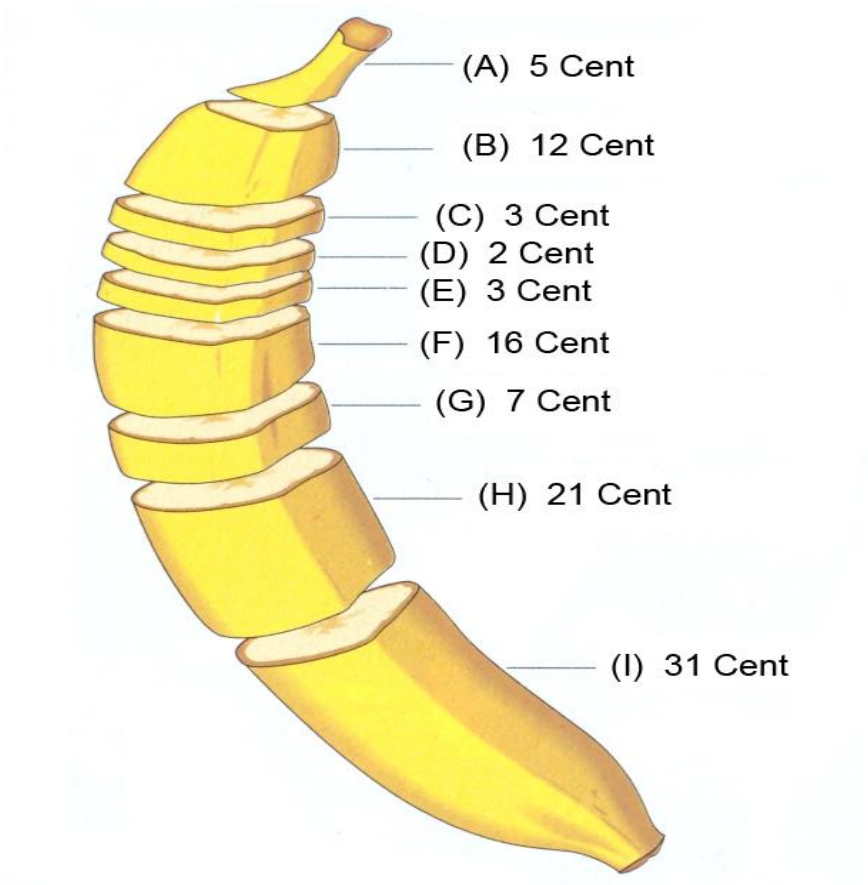
Appendix 1

Banana Trade (BT)



A lot of people enjoy eating bananas. That is why they are imported to Europe from countries like Ecuador, Costa Rica or Columbia, where they are grown. This is obviously linked to expenses. The banana in the picture costs exactly One Euro. The amount of One Euro contains…

(A) The salary of the plantation workers,
(B) costs of fertilisers,
(C) expenses for transferring the bananas to a harbour,
(D) the profit of the plantation owner,
(E) costs for the banana tax,
(F) shipping costs,
(G) the profit of the wholesaler,
(H) costs for storage,
(I) the profit of the retailer.

Questions about Banana Trade

A) How many cents does a retailer make out of one banana?

- O 3 Cent
- O 7 Cent
- O 21 Cent
- O 31 Cent

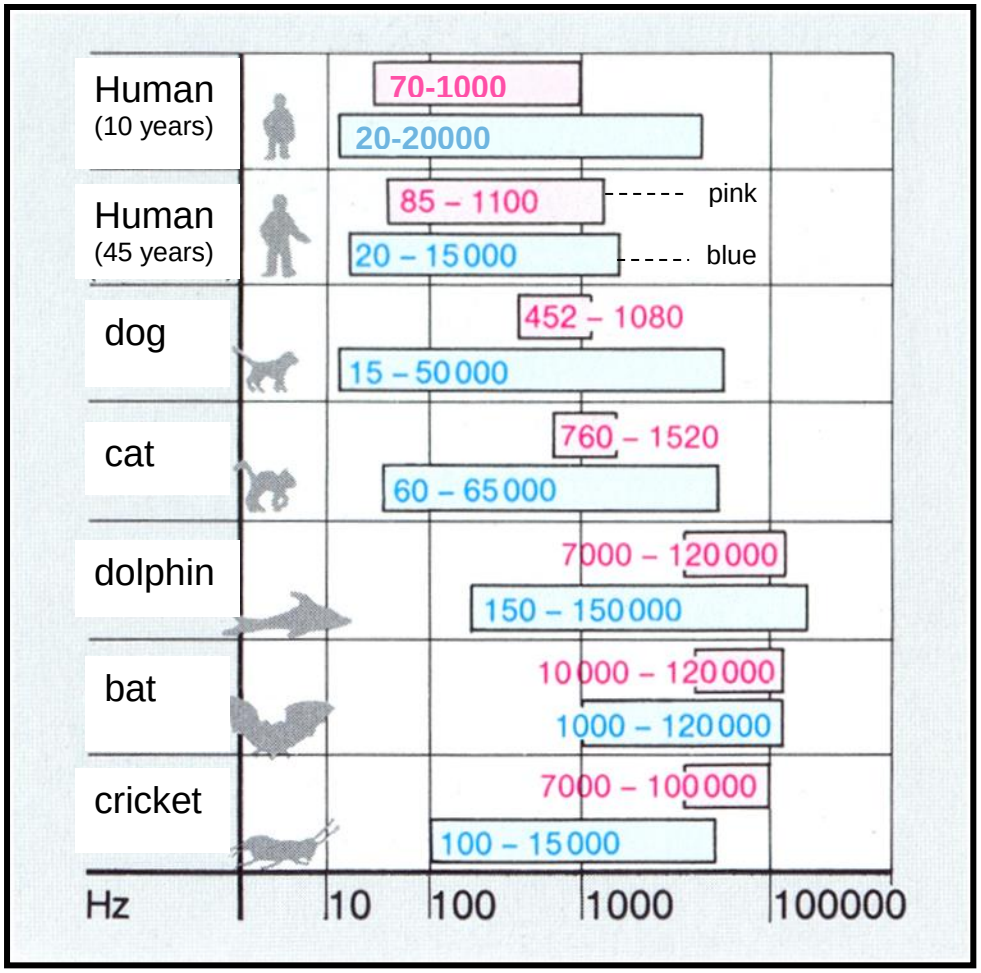
B) For what does one have to pay least of all, if one buys a banana?

- O profits of wholesalers
- O wages of plantation workers
- O profits of plantation owners
- O profits of retailers

C) If we compare plantation workers, retailers and wholesalers, then...

- O …the plantation workers make most, the wholesalers make less and the retailers make least of all out of one banana.
- O … the wholesalers make most, the plantation workers make less and the retailers make least of all out of one banana.
- O … the retailers make most, the wholesalers make less and the plantation workers make least of all out of one banana.
- O … the retailers make most, the plantation workers make less and the wholesalers make least of all out of one banana.

Acoustic Ranges (AR)



Sounds and noises are created by sound waves. The faster the wave vibrations are the higher they sound. The human ear can distinguish between sounds with low frequency sound waves (20 Hz) and high frequency sound waves (20 000 Hz) per second. The number of waves per second is called the frequency of the sound, and is measured in Hertz (Hz). A 10-year old child can hear sounds at frequencies from 20 Hz up to 20 000 Hz (or 20 kHz). This range is called the audible range, in the image it is shown in blue. A 10-year old child also produces sounds, for example, by speaking, in a range from 70 to 1000 hertz. This is called the vocal range, which is shown in pink. The image displays the audible range and the vocal range among different organisms

Questions about Acoustic Ranges

A) Which of the following animals can hear sounds of 120 000 Hertz?

- O dog
- O cricket
- O cat
- O bat

43_05

43_04

B) Which of the following creatures has the acoustic range, which enables to create the deepest sounds?

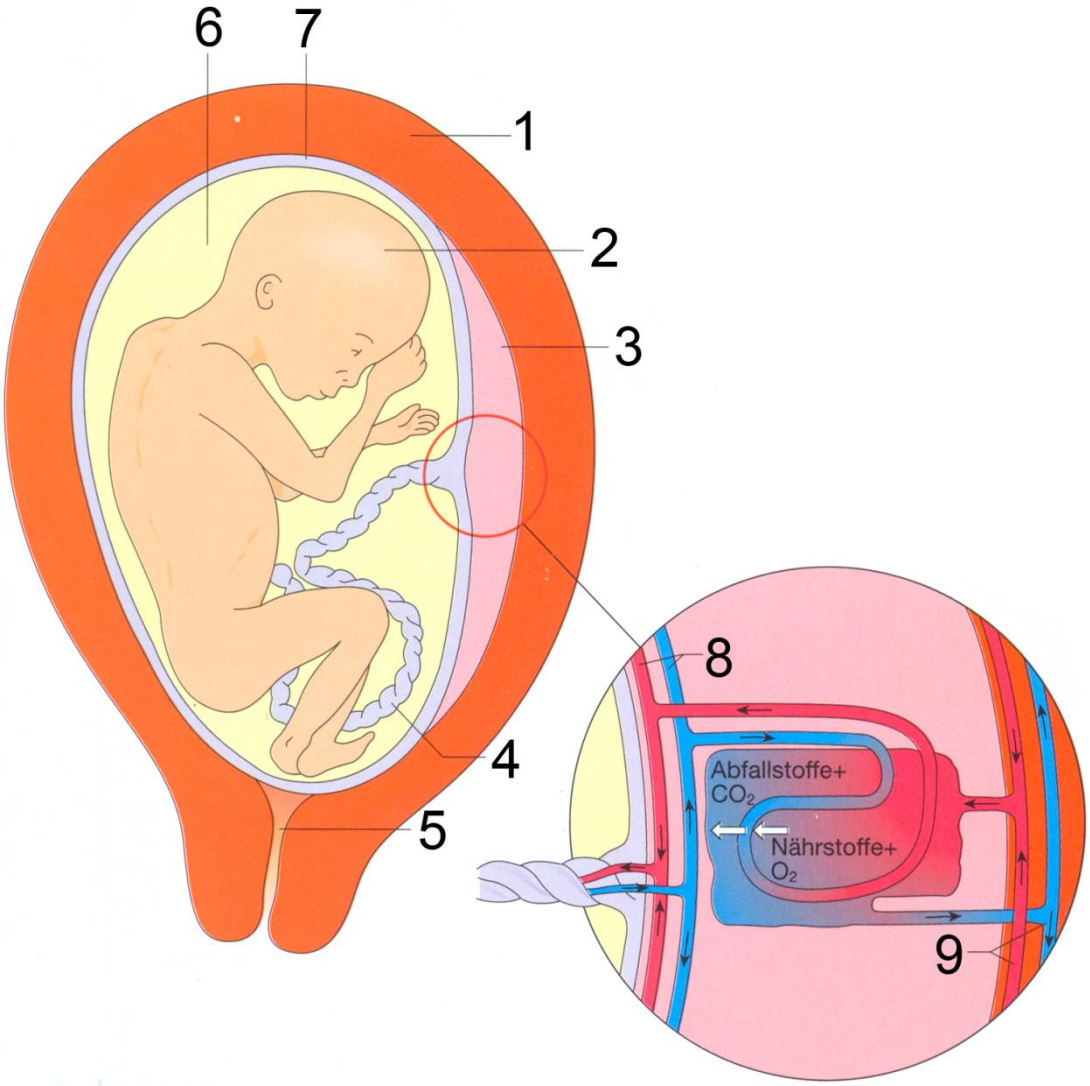
- O human (45 years)
- O cat
- O dog
- O cricket

43_06

C) Which of the following creatures can hear sounds lower than 100 Hertz and create sounds higher than 1500 Hertz?

- O human (10 years)
- O human (45 years)
- O cricket
- O cat

The Fetus (FS)



In the uterus or more precisely uterine wall **(1)** the child grows up. From the fourth month of pregnancy onwards it is called the foetus **(2)**.The foetus is fed by the placenta **(3).** Here, an exchange happens between the blood vessels of the foetus **(8)** and the blood vessels of the mother **(9)**. (See enlarged picture). Nutrients, Oxygen (O_2) as well as carbon dioxide (CO_2) and waste products get exchanged across the blood vessels. The umbilical cord **(4)** connects the foetus to the mother. The amniotic fluid **(6)** protects the child. It can be described as the protective cushion of the foetus, since it also helps to absorb shocks. If the amniotic sac **(7)** bursts, the birth is initiated and the foetus moves through the cervix **(5)** during labour.

Questions about the Fetus

A) What do you call the pink-colored layer?

- O placenta
- O umbilical cord
- O uterine wall
- O amniotic fluid

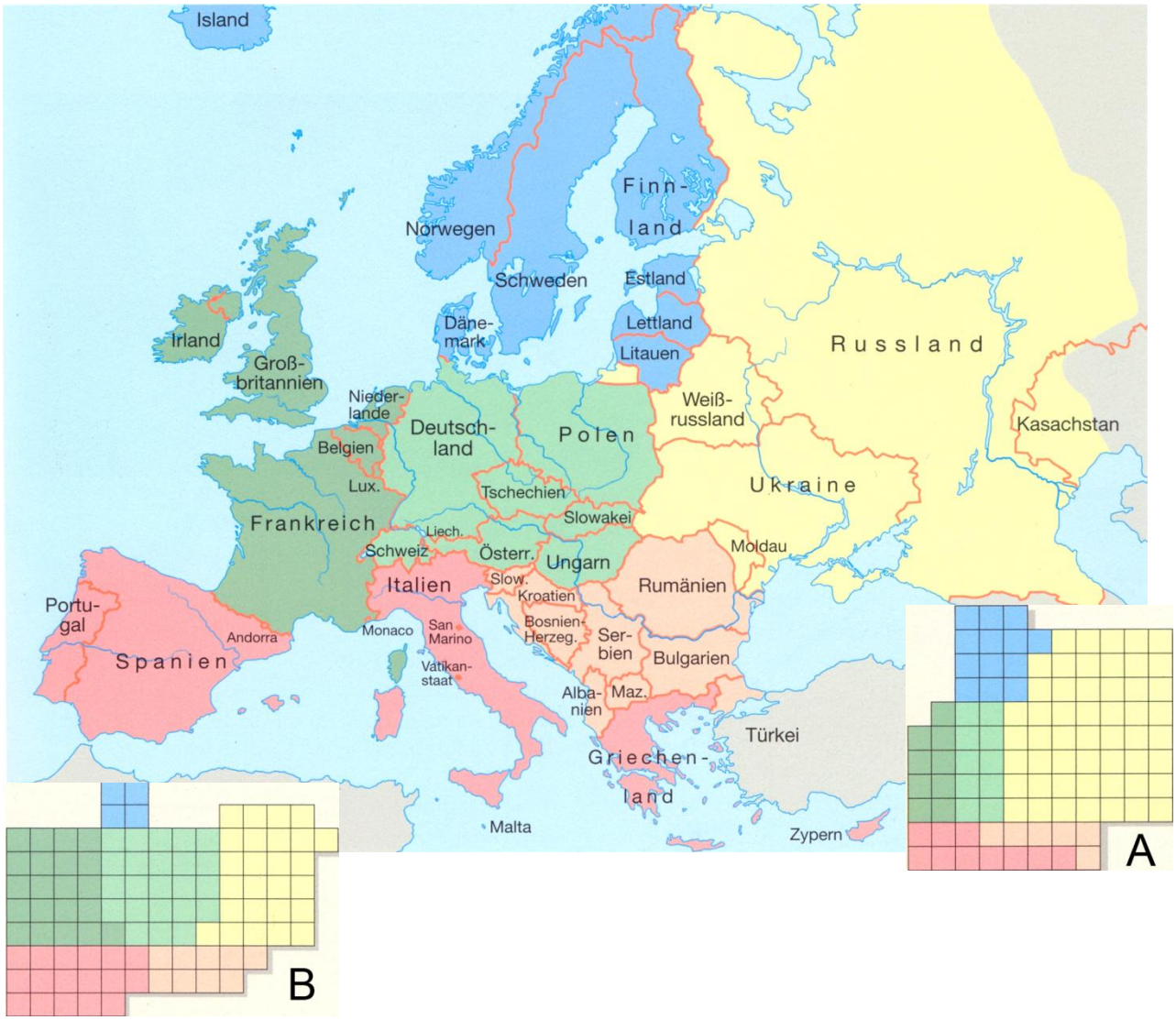
B) What is <u>not</u> connected directly?

- O blood vessels of the mother and blood vessels of the child
- O cervix and amniotic fluid
- O umbilical cord and amniotic sac
- O placenta and uterine wall

C) Which way does the fetus' blood take after it has been enriched with nutrients and oxygen? It flows …

- O through the placenta back and via the umbilical cord to the fetus.
- O through the placenta back and through the fetus‘ blood vessels into the amniotic sac.
- O through the placenta back and through the fetus‘ blood vessels into the uterine wall.
- O through the placenta back and through the mother's blood vessels directly to the fetus.

The Continent Europe (EP)



The large map shows the continent Europe. Actually Europe is not an independent continent, but together with Asia it forms the continent Eurasia. In the south, west and north it is clearly bordered by the oceans. The East is difficult to be bound, as there are no natural boundaries. An agreement has set the boundaries at the Ural Mountains and further south. Thus, Russia and Kazakhstan belong to Europe and to Asia. The countries of Europe form different regions regarding geographical and economic attributes. The regions are: North Europe (blue), West Europe (dark green), Middle Europe (bright green), South Europe (red), East Europe (yellow) and South-East Europe (pink).

In picture A, each small box represents 1 part of Europe's surface area. In picture B each small box represents 1 part of Europe's population.

Questions about the Continent Europe

A) In which part of Europe are countries located, which belong to Europe and Asia?

- O North Europe
- O South Europe
- O Middle Europe
- O East Europe

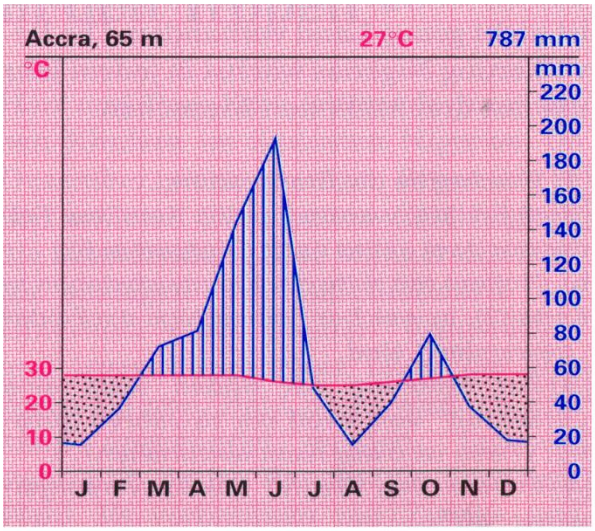
B) Which regions of Europe are equal in area?

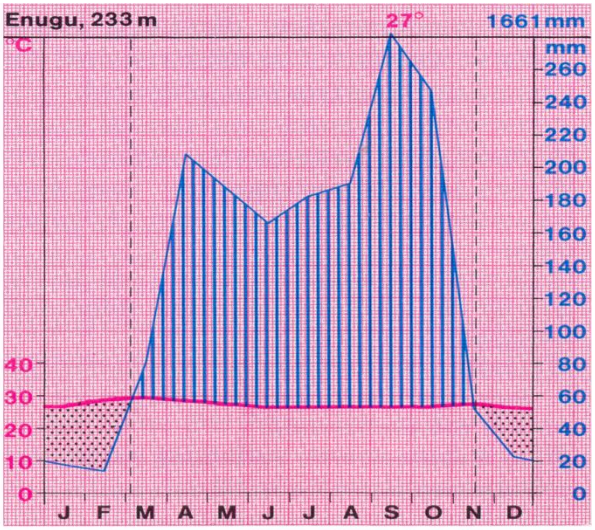
- O East Europe and North Europe
- O South Europe and South-East Europe
- O Middle Europe and South Europe
- O West Europe and Middle Europe

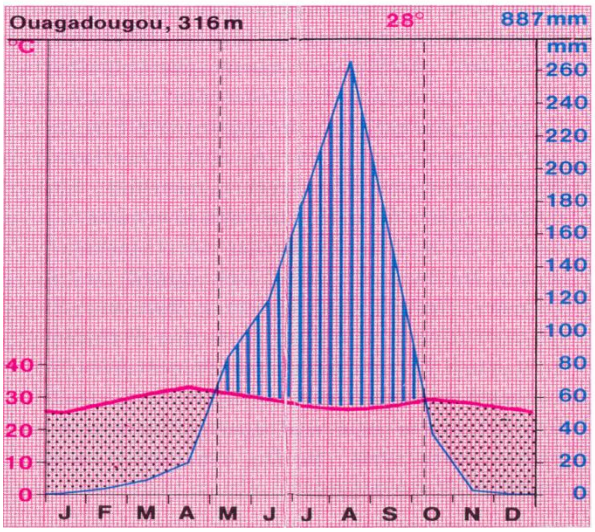
C) Which region of Europe has one area-part more but four population-parts less than West Europe?

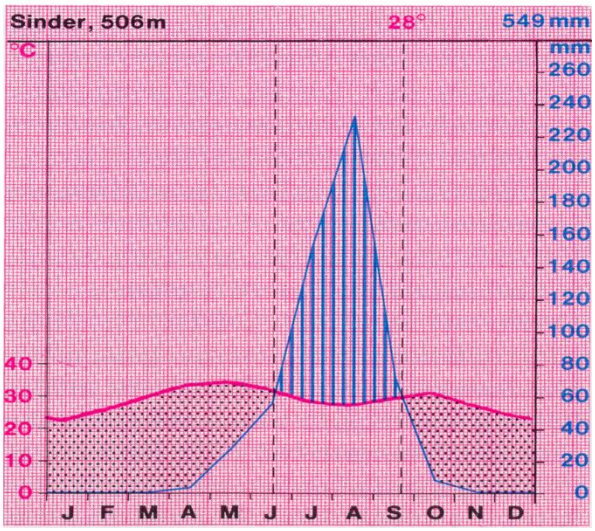
- O Middle Europe
- O North Europe
- O South Europe
- O South-East Europe

Savannas (SV)









Based on different rainy seasons, the savanna is divided into different types:

The city of **Enugu** is located in a humid savanna, the cities of **Accra** and **Ouagadougou** in a dry savanna and the city of **Sinder** in a thorns savanna. Depending on the region and the city, different crop plants and plants to export are cultivated due to the different amount of rainfall (e.g. 887 mm rainfall per year in Ouagadougou).

Those months, in which the climate is sufficiently humid for the corresponding plant growth, can be recognized in the diagrams by the areas hatched in blue above the read temperature curve. When the rainfall curve (blue) proceeds above the temperature curve, there is more rainfall than what can evaporate. The months are signified beneath each diagram with letters (e.g.: F = February).

The following plants need different rainfall per year to grow properly:

millet: **180** to **700 mm**
manioc: **500** to **2000 mm**
yams: more than **1500 mm**
peanut: **250** to **700 mm**
cotton: **700** to **1500 mm**

Questions about Savannas

A) What is the rainfall per year in **Accra**?

- O 887 mm
- O 1661 mm
- O 787 mm
- O 549 mm

B) Which of the following plants can be cultivated in **Enugu**?

- O peanut
- O yams
- O cotton
- O millet

C) Which plant can be cultivated in most savanna types?

- O millet
- O manioc
- O cotton
- O peanut