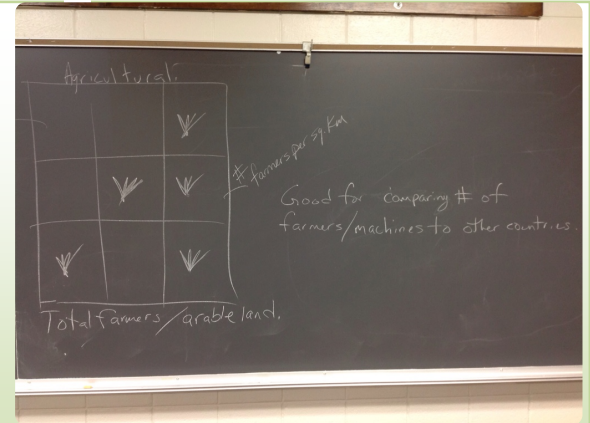
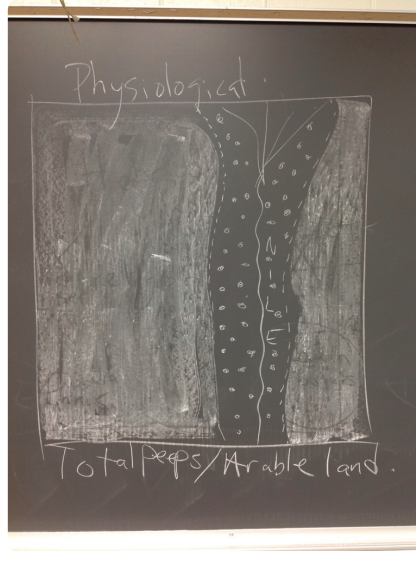
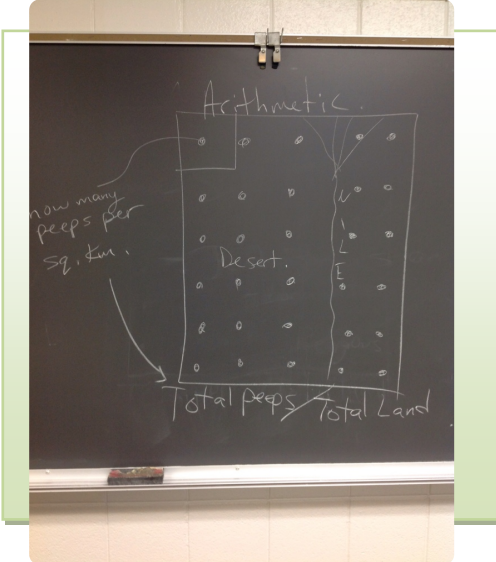


Space and Distribution



In the box above, illustrate arithmetic density.

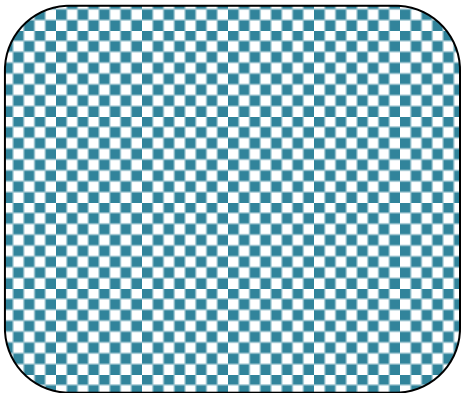
In the box above, illustrate physiological density.

In the box above, illustrate agricultural density.



1. German philosopher Immanuel Kant compared geography's concern for space to history's concern for time.
2. Why do geographers prefer to organize their materials spatially?
So that they can see patterns, concentration, + density.
3. The arrangement of features in space is known as Distribution / Aggregation.

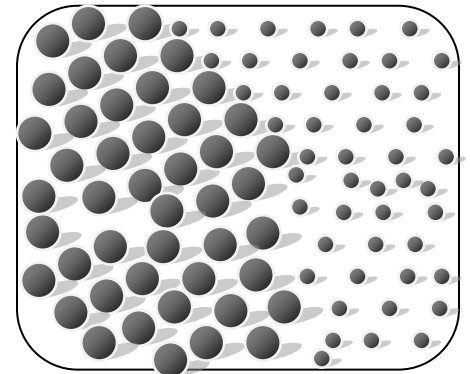
Identify the spatial distribution type below for each of the illustrations:



Pattern



Concentration



Density

4. If we wanted to measure the frequency (or occurrence) of car accidents on _____ what type of measurement would we be finding? Pattern



6. In order to figure out the *arithmetic density* of an area, what is the mathematical formula that we must follow? Use the book to create a formula.

$$\frac{\text{Total \# peeps}}{\text{Total Land area}}$$

7. Calculate the *arithmetic densities* for the following:

The United States has a total area of 9,826,675 sq km and a total population of _____ = _____ people per sq. km
 $316,668,567 = 32.23$ km^2

Switzerland's total area is 41,277 sq km and the total population _____ = _____ people per sq. km
 $7,996,026 = 193.72$

Poland's total area is 312,685 sq km and has a total population of _____ = _____ people per sq. km
 $38,383,809 = 122.76$

China's total area is 9,596,961 sq km and has a total population of _____ = _____ people per sq. km
 $1,349,585,838 = 140.63$

Russia's total area is 17,098,242 sq km and has a total population _____ = _____ people per sq. km
 $142,500,482 = 8.33$

8. Which of the country in #7 has the lowest *arithmetic density*?
Russia

9. Which of the country in #7 has the highest *arithmetic density*?
Switzerland

10. Would you say that it is better or worse to have a higher or lower arithmetic density? _____
 Why? _____

11. T F A large population means a country has a high density.
Land area?

12. T F The arithmetic density is correlated to wealth and poverty.
irrelevant.

13. T F Arithmetic densities can help us compare the distribution of people in different countries.

Though must look cautiously.

14. A low high (circle one) *physiological density* may mean that a country has a greater ability to grow enough food to sustain its population.

15. If we know that the total area of the **United States** is 9,826,675 sq km and they have 18.01% of arable farmland, how many square km of arable farmland does the United States have? 1,769,784.16 sq km arable land

15b . Calculate the total arable farmland for the following countries:

Switzerland's total land area is 41,277 sq km and the arable land is (9.8) % \rightarrow 4045.146 km sq.

Poland's total land area is 312,685 sq km and the arable land is (35.49) % \rightarrow 110,971.91 km sq.

China's total land area is 9,596,961 sq km and the arable land is (11.62) % \rightarrow 1115,166 km sq.

Russia's total land area is 17,098,242 sq km and the arable land is (7.11) % \rightarrow 1215685.01 km sq.

16. In order to figure out the **physiological density** of an area, what is the mathematical formula that we must follow?

$$\frac{\text{Total Peeps}}{\text{Arable Land}}$$

17. Calculate the **physiological densities** for the following:

With a total population of 307,212,123, the United States has a **physiological density** of 173.59 ppl km²

With a total population of 7,604,467, Switzerland has a **physiological density** of 1879.91 ppl km²

With a total population of 38,482,919, Poland has a **physiological density** of 346.78 ppl km²

With a total population of 1,338,612,968, China has a **physiological density** of 1,237 km² ppl.

With a total population of 140,041,247, Russia has a **physiological density** of 115.2 ppl km²

18. Which of the country in #17 has the lowest **physiological density**?

Russia

In your own words, what exactly does that mean?

19. Which of the country in #17 has the highest **physiological density**?

Switzerland

In your own words, what exactly does that mean?

20. Would you say that it is better or worse to have a higher or lower **physiological density**? _____

Why? _____

21. T / F A large population means a country has a high density.

Could, but must consider the landscape.

22. T / F The **physiological density** is correlated to wealth and poverty.

No correlation

23. T / F A low **physiological density** means that a country may have an easier time growing food.

Could, flatter land. → more arable land or less ppl per sq. km.

