**Instructions:** Armed with a calculator, your lecture notes, your text, and a buddy - answer the following questions. Don’t just let your buddy answer the question for you; make sure that you ask them how they came to a conclusion if you don’t quite see it for yourself. Help each other.

1. German philosopher _________________________ compared geography’s concern for space to history’s concern for time.
2. Why do geographers prefer to organize their materials spatially?
   ______________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________
3. The arrangement of features in space is known as _____________________.

Identify the spatial distribution type for each of the illustrations shown below:
Choose from: Concentration / Pattern / Density

In the box above, illustrate arithmetic density.
In the box above, illustrate physiological density.
In the box above, illustrate agricultural density.

4. If we wanted to measure the frequency (or occurrence) of car accidents in your neighborhood’s busiest intersection, what type of measurement would we be finding? ______________________________________________________________________________________
5. 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.

6. 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

Switzerland’s total area is 41,277 sq km and the total population ________ = ______ people per sq. km

Poland’s total area is 312,685 sq km and has a total population of ________ = ______ people per sq. km

China’s total area is 9,596,961 sq km and has a total population of ________ = ______ people per sq. km

Russia’s total area is 17,098,242 sq km and has a total population ________ = ______ people per sq. km

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

8. Which of the country in #7 has the highest arithmetic density?

9. Would you say that it is better or worse to have a higher or lower arithmetic density? _______________

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

11. T/F The arithmetic density is correlated to wealth and poverty.

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

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

14. 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? ________________.

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

Switzerland’s total land area is ______ sq km and the arable land is ______% = ___________ km sq.

Poland’s total land area is ______ sq km and the arable land is ______% = ___________ km sq.

China’s total land area is ______ sq km and the arable land is ______% = ___________ km sq.

Russia’s total land area is ______ sq km and the arable land is ______% = ___________ km sq.
16. In order to figure out the **physiological density** of an area, what is the mathematical formula that we must follow?

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

   - With a total population of 307,212,123, the United States has a **physiological density** of: __________
   - With a total population of 7,604,467, Switzerland has a **physiological density** of: __________
   - With a total population of 38,482,919, Poland has a **physiological density** of: __________
   - With a total population of 1,338,612,968, China has a **physiological density** of: __________
   - With a total population of 140,041,247, Russia has a **physiological density** of: __________

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

   _______________________________

   In your own words, what exactly does that mean?

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

   _______________________________

   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.

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

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

Notes: