**KEY**

**AP Human Geography Global Population Data Sheet Activity Mr. Stepek**

**(using statistical tables and analyzing data)**

**Directions: Using the chart below, answer the following questions. Remember to answer in complete answer format to the level of the prompt. Review “How to write FRQs” under study tools on my website if you don’t know what the prompt requires. You should be using the table to provide support/examples for your answers! Don’t average statistics between regions however. Since different regions have different population sizes an average would not be accurate or appropriate. Rather, cite “ranges” (“Except for Oceania, most MDC crude births are between 8 - 11 while, with the exception of East Asia, most LDC crude birth rates are over 15”) or specific examples from the chart to support your conclusions. Do not use the internet to find support, use the chart!**

**The team lead should download a copy, rename it (“P6G2 Joe Mary Sue and Jim” would be the name for Group 2 in Period 6 consisting of students Joe, Mary, Sue and Jim) and share with the rest of the group as editors. The team lead should SHARE the finished work product with me by Friday October 13th at 11:59 pm.**

**The questions require you to make connections between sets of data and to draw conclusions. I’m not giving you the answer; I want YOU to think about why these statistics are related. Please refer to your guided reading key, referenced page numbers and the Demographic Transition graphic organizer we completed together. Type directly into this form; the sheet should move to make room for your answers.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Region** | | **Crude Birth Rate**  **(CBR)**  **(# of births/1000 pop.)** | **Crude Death Rate**  **(CDR)**  **(# of deaths/1000 pop.)** | **Natural Incr. Rate (NIR or RNI)**  **(NIR = CBR – CDR convert to %)** | **Total Fertility Rate**  **(TFR)** | **Infant Mortality Rate**  **(IMR)**  **(out of 1,000 live births)** | **GNI per capita**  **(global avg. = $16,885)** | **% urban** |
| **MDC Regions** | North America | 11 | 8 | (11 – 8) = 3/1000  Move decimal one digit to left to convert to percentage  .3% (≈⅓ of 1%) | 1.7 | 6 | $62,327 | 82 |
| Northern Europe | 11 | 9 | 0.2% | 1.6 | 3 | 49,468 | 82 |
| Western Europe | 10 | 10 | 0.0% | 1.7 | 3 | 53,871 | 80 |
| Eastern Europe | 10 | 13 | -0.3% | 1.5 | 5 | 25,463 | 70 |
| Southern Europe | 8 | 10 | -0.2% | 1.3 | 3 | 37,188 | 72 |
| Oceania | 17 | 7 | 1.0% | 2.3 | 16 | 36,264 | 68 |
| **“LDC” Regions** | Northern Africa | 24 | 6 | 1.8% | 3.0 | 23 | 9.741 | 53 |
| Sub-Saharan Africa | 36 | 9 | 2.7% | 4.8 | 53 | 3,667 | 41 |
| Latin America and the Caribbean | 16 | 6 | 1.0% | 2.0 | 14 | 15,944 | 79 |
| Southwest Asia | 20 | 5 | 1.5% | 2.6 | 18 | 29,309 | 72 |
| Central Asia | 23 | 5 | 1.8% | 2.8 | 16 | 11.088 | 48 |
| South Asia | 21 | 6 | 1.5% | 2.4 | 37 | 6,575 | 36 |
| Southeast Asia | 18 | 7 | 1.1% | 2.2 | 22 | 11,893 | 49 |
| East Asia | 10 | 7 | 0.3% | 1.5 | 9 | 18,578 | 64 |

1. **Calculate the NIR for each region and place it in the column shaded red above.** (For this activity, in order to differentiate between MDCs and LDCs, the chart uses the thinking of Brandt’s line, except Central Asia is classified as LDC and Japan is grouped within East Asia)?
   * + Students calculated the NIR correctly for most of the regions (1)
     + Students made several errors in calculating the NIR for the regions above (.5)
     + Students responses did not demonstrate understanding of how to calculate the NIR (0)
2. **TFR and CBR**
   1. **EXPLAIN the extent to which** the TFR or the CBR is more accurate of childbirth trends in a society (see Rubenstein p 56).

* student should define CBR and TFR
* student must take a stand on which (CBR or TFR) is more accurate
* student should explain how CBR is an actual annual measurement of what happens while TFR is a prediction based on current trends over what will happen over 34-year period (women aged 15 - 49). **Therefore CBR is more accurate because trends can change.** In factr we see this happening rapidly in places like India whose TFR has declined significantly in recent years.
* The “explain the extent to which” prompt is covered in the FRQ writing skills under study tools on my website.
  1. **EXPLAIN** replacement rate (see de Blij p 49).
     + Students must define “replacement rate” as a TFR of 2.1. It means that parents are having children who will eventually take their place in the total population.
     + The consequences of this (EXPLAIN prompt, it is required for a full point) are:
       - If a society maintains a replacement rate of 2.1 then NIR will be near 0% or Zero Population Growth (ZPG) OR
       - if replacement rate is greater than 2.1, NIR will be greater than 0% and population will continue to grow OR
       - if replacement rate is less than 2.1, NIR could be less than 0% and the population will decrease.
  2. **COMPARE** the TFR between LDCs and MDCs.
     + This is a compare questions where you should mash two describes together, it is not asking you to compare the causes or consequences of of TFR
     + You should use the chart for the examples required by a DESCRIBE prompt
     + Student should state that TFR is higher in LDCs than in MDCs
       - Students should provide examples form the chart that support that TFR is higher in LDCs than MDCs
       - AS EXPLAINED TO YOU, don’t use averages. Each of these regions has a different sized population and therefore you would need to weight that calculation in order for it to be accurate.

1. **Population dynamics in Southern and Eastern Europe**
   1. **IDENTIFY** the demographic problem being faced by the MDC regions of Eastern and Southern Europe.
      * Students should identify the demographic problem being faced by Eastern and Southern Europe is a declining population or negative population growth or aging population or a shrinking workforce.
   2. **EXPLAIN** one problem that arises from the demographic problem faced by Eastern and Southern Europe (de Blij p 49).
      * Consequences of the above could include
        + less workers to pay taxes to support high aged dependency should incl. some examples of aged dependency costs (see below).
        + Elderly focused costs such as health care (the elderly use a lot of health services and prescription medicines), skilled nursing care (the elderly are often unable to care for themselves and need help with daily activities), pensions/social security (sicne the elderly are no longer working they will need an income stream).
        + shrinking workforce will affect the country’s ability to fill (low-skill) jobs OR how a declining population leads to less consumers and less GNI per capita/economic activity.
2. **Population dynamics in North America**
   1. **IDENTIFY** the stage along the demographic transition where North America is located.
      * North America is presently in stage four of the demographic transition.
   2. **IDENTIFY** what its placement along the DTM would imply about population growth in North America.
      * Being in stage four, would imply that North America is experiencing zero or near zero population growth.
   3. (According to its NIR, North America’s population should reach 402 million by 2050. Yet the Population Reference Bureau estimates North America’s population to be 435 million in 2050) **IDENTIFY** what you think accounts for this difference.
      * The difference between North America’s population based on NIR and its population based on the estimate by the Population Reference Bureau is due to immigration. North America’s population growth will be primarily caused to immigration as it is a stage four country.
3. **Relationship between TFR and IMR**
   1. **EXPLAIN** how the IMR affects TFR with reference to table above.
      * Students should define IMR (and TFR if this was a stand alone assignment or different prompt on the AP Exam) as the Infant Mortality Rate or the number of children who die in their first year of life based on 1,000 live births in a society.
      * A higher TFR doesn’t necessarily cause a higher IMR. They are rates not absolute numbers, saying having more babies results in more infant deaths is correct in absolute numbers but not necessarily true in rates since it is compared to the number of live births.
      * Students should state that when IMR this causes TFR to be higher
      * Students should reference evidence form the table to support their answer conclusion
      * Students should state a reason for this relationship (EXPLAIN prompt)
        + LDC/subsistence farmers view children as economic assets. Since many children die in infancy, LDC parents will continue to have more children in hopes of having some of them live to help with farming.
4. **Relationship between urbanization and NIR**
   1. **EXPLAIN** the relationship between the urbanization rate and NIR with reference to the table above.
      * Urbanization probably doesn't need to be defined since its definition is obvious
      * NIR should be at least identified (Natural Increase Rate) and most likely defined if this was a stand alone question or a separate series of FRQ prompts from which it was previously identified or defined.
      * As urbanization goes up, NIR goes down
      * Students should cite evidence from the chart above support this relationship
      * Students should provide an explanation of why this happens (EXPLAIN prompt!)
        + As people migrate to cities they realize children are economic burdens who need to be fed, sheltered, clothed and educated without providing a useful economic return to the family.
        + women are exposed to more secular, less traditional values in urban settings such as access to contraceptives and a reduction in female subservience
5. **Relationship between GNI per capita and NIR**
   1. **DESCRIBE** the general relationship between GNI per capita and the NIR and evidenced in the table above.
      * Students should identify and define GNI per capita as the (Gross National Income per capita) which is the total economic output of a country divided by its population.
      * Students should identify NIR (Natural Increase Rate) in their responses and define if this was a stand alone prompt or if it had not been defined under previous prompt with the series (a - g)
      * Students should state that as NIR goes up NIR goes down (inverse relationship).
      * Students should cite evidence from the chart to support this conclusion.
6. **Relationship between Crude Death Rate (CDR) and Development**
   1. **COMPARE** the crude death rate in MDCs to that of LDCs.
      * crude death rate should be defined as the total number of deaths in a society based on 1,000 people
      * students should state that the crude death rate is higher in MDCs than LDCs.
      * students should cite evidence from the chart to support this statement
   2. **EXPLAIN** one reason for the differences between the crude death rate in MDCs and LDCs.
      * Student should explain that the crude death rate in MDCs is higher because
        + MDCs have a larger elderly population than LDCs so more people in relation to the total population are in age cohorts experience death.
        + economic pessimism and dislocation has occurred in certain regions within MDCs like Eastern Europe/Russia or Appalachia in the United States that has resulted in people resorting to substance abuse in order to cope. In Russia the rates of alcoholism among males has reduced their life expectancy to the low-60s and opioid dependency in Appalachia has caused the life expectancy in the US to decline for several years in a row.
7. **Exceptions**
   1. **DESCRIBE** how Southwest Asia violates relationships established in previous questions.
      * Students should state how Southwest Asia violates an established relationship
        + as GNI per capita goes up, TFR should come down, the opposite is true for Southwest Asia
      * Students should cite evidence from the chart to support this idea
        + Southwest Asia’s GNI per capita ($29,309) is considerably higher (almost 2x) than any other LDC regions but its TFR (2.6) is still higher than many other LDC regions including the much poorer South Asia (2.4), Latin America (2.0) and Southeast Asia (2.2)
   2. **EXPLAIN** one reason why Southwest Asia violates these relationships (you may use the internet here but don’t “copy”).
      * One reason for why Southwest Asia’s rise in GNI per capita does not correlate with a reduction in TFR is that while Southwest Asia has earned a lot of money from huge oil reserves it still has a male -dominated culture with low female empowerment especially in Muslim-dominated Persian Gulf states. Where there is less female empowerment, women do not get to make reproductive choices and the TFR is higher.
   3. **DESCRIBE** how Eastern Europe violates relationships established in previous questions.
      * Student should state the relationship being violated
        + In most cases when you have a relatively low GNI per capita your TFR is higher.
      * Student should cite evidence from the chart to support the above
        + In the case of Eastern Europe its GNI per capita is around 26k which is under ½ of the GNI per capita of North America which is the highest at 62k. Yet Eastern Europe has the lowest TFRs of any global region at 1.3 compared to other MDC regions like North America and Western Europe that both have TFRs of 1.7
   4. **EXPLAIN** one reason why Eastern Europe violates these relationships (refer to or review prior learning).
      * Students should provide a reason for why Eastern Europe has a relatively low GNI per capita and a low TFR (opposite should be true)
        + Eastern Europe has suffered economic hardship because of communism. Although communism provided some developmental benefits which resulted in decreasing TFR, it did not produce the economic benefits enjoyed by the capitalist West and which would have been reflected in a higher GNI per capita. Furthermore, when the communist system was overthrown in Eastern Europe many inefficient communist-era businesses were closed leading to widespread unemployment and economic pessimism resulting in an even lower TFR.