Population Pyramid Graphs

There will be at least 2-3 questions on your exam that use a population pyramid graph. They are different than other types of graphs, so pay close attention to the directions.

1. Watch the video explaining the population pyramid graphs, taking notes on your paper.
2. Read the graphs and answer the questions on your paper.

There are 4 types of population pyramid graphs. Depending on how the population is proportionally on the graph, it tells you whether the population of that country/region is expanding (growing), stationary (remaining the same), or contracting (decreasing). If you do not already have these 3 types drawn on your paper, please copy them on your paper.

Guided Practice

To the right you see two graphs showing the population of the United States and Nigeria. The answers are on page 2. Do not look at the answers until you try these yourself, then see if you are right or wrong!
a* Which of the two countries has a population that is expanding, or growing?
b* Which of the two countries has a population that is stationary, or staying the same?
c* Which of the two countries has the highest overall population?
d* Which of the two countries has the highest proportion of young children?
Guided Practice Answers:
a* Nigeria is expanding. Whenever the bottom of the graph (the younger children) is larger than the top of the graph (the older people), this population is growing, or expanding.
b* United States is stationary. The ages are fairly equal between young, middle age, and older, thus the population is neither growing or decreasing, but remaining the same. The top part of the graph (older people) will almost always be less than the graph, as this is the age at which most people begin to die.
c* At the top of each graph, it tells the total population from each country. The United States currently has 301 million people, whereas Nigeria has 140 million people. The United States has a higher overall population.
d* Nigeria. In relation to the rest of the graph, Nigeria has MANY more young people than older. Nigeria has the highest proportion (or percentage) of young people in relation to the rest of the age groups.

Independent Practice

For each problem, write down the number and letter of your answer. When you check your answers later, you will mark which you got correct and which were incorrect (put an “x” next to any incorrect, don’t change your answer). If you get a problem correct, you do not need to write down “why” the answer was that choice. If you miss the problem, go back and figure out why that was the correct answer choice, and write your explanation next to the missed answer.

1. Which of the following best defines the term population pyramid?
   a. All of the different species of the world.
   b. The distribution of population by sex, age, etc.
   c. The number of persons in a country, city, or any district.
   d. The force that causes a growing population to spread out of its environment.

2. Why does Kenya’s population pyramid have a much broader base than does the population pyramid for the United States?
   a. Kenya has a much higher per capita birth rate.
   b. Kenya has more individuals below child bearing age.
   c. The United States is comprised proportionately of older individuals.
   d. All of these are correct.

3. Which of the following best defines the term “life expectancy”?
   a. The numbers of years a person lives.
   b. The number of people born each year.
   c. The age to which a person will most likely live.
   d. The average age of all the people who die each year.
4. For the U.S. population of 2000, which age range most strongly correlates to the low birthrate of the mid-1970s?
   a. 10-19  c. 30-39
   b. 20-29  d. 40-49

5. Describe and explain the main features of the population pyramid above.
   a. It has a wide base, so there are many babies born every year. This shows there is a good medical service within the country. The different sectors from 5-9 up to 25-29 decrease very quickly; this is good for the country as there are fewer people to feed and educate. As the ages increase, it gets narrower. This might be because as people get older they leave the country in search of a job or a better standard of living.
   b. It has a wide base, showing this country has a high birth rate. This is likely to be the population of a less developed country. Because of a high infant death rate, due to limited medical care, some families will have
more children. The quickly declining percentages in the 5-9 and 10-14 age groups confirms this. There is a sharp indent in the male side from 15 years upwards; this could be from a recent conflict and men of fighting age have been killed. It could also mean that men have migrated to other countries to get jobs.

C. This pyramid shows some of the features of a developed country. In the past 15 years, this country has had a huge increase in the amount of children being born, because the government has been encouraging families to have more children. The government did this because of a falling population, which was a decline in the labor force. This decrease in the male workforce is best shown in the age groups from 15-29 year olds. From 20 to 84 year olds, the numbers decline quite rapidly, showing a lot of people are dying from diseases common in a developed country, like cancer and heart conditions.

6. Describe the population pyramid and explain the implications of this population structure for the future of the country.

*In your answer, explain what type of base it has, and what that means for the population. Based on the shape, what type of population do they have. Where is the largest grouping (ages), and will this be a problem in the future? If there are any differences between men and women, comment on those and guess why that might occur. Based on all these, is the country developing or developed?
7. Which graph shows a country or continent that is still developing? Why? (Africa, Cuba, US)
8. Which graph shows a country or continent that has a contracting population? Why? (Africa, Cuba, US)
9. Based on the graphs, which country or continent do you think has the best healthcare system? Why? (Africa, Cuba, US)
10. What could explain the spike in population for ages 35-45 in Cuba and ages 25-40 in the US? You can give multiple reasons.