A Country’s Shape Is More Than Its Borders

What Is A Population Pyramid?

A population pyramid is one way to look at the demographics of a country. Demographics are population characteristics, such as age, gender, race, religion, or language. A population pyramid looks at only age and gender. It is constructed to show how many people in a particular age group are male or female. This is done using a horizontal bar graph. The result is a clear picture of how a country’s population breaks down according to gender and age, and where the most people occur according to those two pieces of information.

How To Read A Population Pyramid

The first step is to look at the scale across the bottom of the pyramid. It tells if the numbers represent thousands or millions. Next, look at the age groupings. These are usually going up the middle of the pyramid. Then notice that males are shown on the left side of the graph, females on the right. Lastly, to determine how many males or females are in a certain age group, find that age group in the center, go to the end of the horizontal bar either left or right, then go down to the scale to see how many.

Interpreting A Population Pyramid

Population pyramids can show if a country’s population growth is slow, rapid, or negative (little to none). A country with rapid growth will have a wide base and narrow top. A country with slow growth will have almost equal numbers from top to bottom. A country with negative growth will have fewer at the bottom and top, and most of the population in the middle. Determining growth rate leads to questions of what kinds of services would a government expect to need to provide. Do more children mean more schools, daycare facilities, and the need for more teachers? Do more elderly mean more retirement centers, pension plans, and health care? Does a large number in the middle mean more jobs, job training programs, and universities? Why are so few at the bottom? Are more children due to economics (children provide farm labor or money from work they perform) or high mortality rates (many die before age 2 or 3)? What does a government need to do to change this—more jobs for adults, better health care? Using this information, a government can make plans and solve problems.

Another thing a population pyramid can show is differences in numbers of males and females in certain age groups. For instance, why would a certain age group have more females than males? Are there age groups where both males and females are less than the groups above and below them? Why? These questions can be answered by looking at the history of that country. Was there a war, natural disaster, or economic problem, which reduced the population at that time?
Population pyramids can be used to interpret the past, see the present, and plan for the future.

Practice Sheet

Use the population pyramid of the United States to practice reading and interpreting a population pyramid. Look at the U.S. population pyramid and answer the questions that follow.

U.S. Census Bureau

Population Pyramid for United States

Source: U.S. Census Bureau, International Data Base.
1. Define demographics.

2. What demographics does this pyramid show?

3. What is the scale used?

4. How many years are contained in each age group?

5. How many males are in the 25-29 age group?

6. How many females are in the 45-49 age group?

7. How many males and females are in the 60-64 age group?

8. In what age groups are most of the population located?
9. Does this pyramid show a country with slow, rapid, or negative growth? Why?

10. Why do you think fewer males and females are in the 20-29 age groups than the groups above and below that?

11. Why do you think fewer males are in the 70-85+ age group than females?

12. What services and programs would a government need to consider now? Why?

13. What services and programs will a government need to plan for in the future? Why?
ANSWER KEY

1. Define demographics.
Demographics are population characteristics such as age, gender, race, religion or language.

2. What demographics does this pyramid show?
This pyramid shows how many people in a particular age group are male or female.

3. What is the scale used?
The scale that is used is population in millions.

4. How many years are contained in each age group?
There are five years in each grouping.

5. How many males are in the 25-29 age group?
There are about nine million males in the 25-29 age group.

6. How many females are in the 45-49 age group?
There are about ten million females in the 45-49 age group.

7. How many males and females are in the 60-64 age group?
There are about 11 million males and females in the 60-64 age group.

8. In what age groups are most of the population located?
Most of the population is in the 35-44 age groups.

9. Does this pyramid show a country with slow, rapid, or negative growth? Why?
The U.S. appears to have slow growth. It is becoming more rectangular in shape.

10. Why do you think fewer males and females are in the 20-29 age groups than the groups above and below that?
Answers can vary: deaths due to violence (wars, crime), car accidents, work related accidents, etc.

11. Why do you think fewer males are in the 70-85+ age group than females?
Answers can vary: Men do not live as long as women due to health issues, and participating in greater numbers in violent situations (wars, crime).

12. What services and programs would a government need to consider now? Why?
Answers can vary: job programs, health programs to prolong life, increased retirement contributions, etc.

13. What services and programs will a government need to plan for in the future? Why?
Answers can vary: increased health facilities, improved retirement systems, fewer or more government services, etc.
Countries of the World Population Pyramid Assessment
Multiple-Choice Quiz

Directions: Using the population pyramids for Australia, India, and Bulgaria, answer the following questions:

1. What is the scale used on the Australia population pyramid?
   a. hundreds
   b. thousands
   c. millions
   d. billions

2. On the India population pyramid, how many years are in each age group?
   a. 5
   b. 1
   c. 2
   d. 10

3. Demographics are
   a. population characteristics.
   b. economic characteristics.
   c. government preference characteristics.
   d. religion characteristics.

4. Which is not true of a population pyramid?
   a. It shows gender and age.
   b. Males are on the left.
   c. It shows trends.
   d. Females are on the left.

5. Which population pyramid shows rapid growth?
   a. Australia
   b. India
   c. Bulgaria
   d. none of them

6. Which population pyramid shows slow growth?
   a. Australia
   b. India
   c. Bulgaria
   d. none of them

7. Which population pyramid shows negative growth?
   a. Australia
   b. India
   c. Bulgaria
   d. none of them

8. On the India population pyramid, how many males are in the 35-39 age group?
   a. 50 million
   b. 30 million
   c. 35 million
   d. 10 million
9. On the Bulgaria population pyramid, how many females are in the 50-54 age group?
   a. 200,000       c. 350,000
   b. 300,000       d. 100,000

10. On the Bulgaria population pyramid, which age group is smaller than the ones above and below it?
    a. 0-4           c. 15-19
    b. 75-79         d. 60-64
Pretend you are a demographics expert hired by the government of Australia, India, or Bulgaria to interpret that country’s population pyramid. Using one of the three population pyramids (Australia, India, or Bulgaria) write a paragraph explaining the type of growth that country is experiencing, and what type of programs and services the government should create to meet the needs of their population now and in the future.
Population Pyramid for Bulgaria

Source: U.S. Census Bureau, International Data Base.
Population Pyramid for Australia

Australia: 2000

Source: U.S. Census Bureau, International Data Base.
Population Pyramid for India

Source: U.S. Census Bureau, International Data Base.
Countries of the World
Population Pyramid Assessment Key

1. C
2. A
3. A
4. D
5. B
6. A
7. C
8. C
9. B
10. D

Total=

Essay (worth 10 points maximum)

States type of growth (2 points)____

States programs needed now (4 points)____

States programs needed in the future (4 points)____

Total=

Overall Total (multiple choice plus paragraph)=

State in the U.S. Population Pyramid Assessment
Multiple-Choice Quiz

Directions: Using the population pyramids for Utah, Tennessee, and North Dakota, answer the following questions:

1. What is the scale used on the Tennessee population pyramid?
   a. hundreds          c. millions
   b. thousands

2. On the Utah population pyramid, how many years are in each age group?
   a. 5                  c. 2
   b. 1

3. Demographics are
   a. population characteristics.
   b. economic characteristics.
   c. government preference characteristics.

4. Which is not true of a population pyramid?
   a. It shows gender and age.
   b. Females are on the left.
   c. It shows trends.

5. Which population pyramid appears to show rapid growth?
   a. North Dakota       c. Utah
   b. Tennessee

6. Which population pyramid appears to show slow growth?
   a. North Dakota       c. Utah
   b. Tennessee

7. Which population pyramid appears to show negative growth?
   a. North Dakota       c. Utah
   b. Tennessee

8. On the Utah population pyramid, how many males are in the 35-39 age group?
   a. 80 thousand        c. 60 thousand
   b. 78 thousand
9. On the Tennessee population pyramid, how many females are in the 50-54 age group?
   a. 150,000  
   b. 190,000  
   c. 200,000

10. On the Tennessee population pyramid, which age group is smaller than the ones above and below it?
    a. 40-44  
    b. 5-9  
    c. 20-24
Pretend you are a demographics expert hired by the state government of Utah, Tennessee, or North Dakota to interpret that state’s population pyramid. Using one of the three population pyramids (Utah, Tennessee, or North Dakota) write a paragraph explaining the type of growth that state is experiencing, and what type of programs and services the government should create to meet the needs of their population now and in the future.
U.S. States
Population Pyramid Assessment Key

1. B
2. A
3. A
4. B
5. C
6. A
7. B
8. B
9. B
10. C

Total=

Essay (worth 10 points maximum)

States type of growth (2 points)_____

States programs needed now (4 points)____

States programs needed in the future (4 points)____

Total=

Overall Total (multiple choice plus paragraph)=

ARIZONA
GEOGRAPHIC ALLIANCE
Population Pyramids

North Dakota: 2000

Tennessee: 2000

Utah: 2000

Source: US Census 2000

Courtesy: Arizona Geographic Alliance
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