

Age Structure Diagrams

Population in Thousands (2008)												
Age Group	France				Nigeria				India			
	M	%	F	%	M	%	F	%	M	%	F	%
0-4	2,080	3.2	1,982	3.1	11,862	8.1	11,344	7.8	63,069	5.5	55,862	4.9
5-9	2,045	3.2	1,948	3.0	10,255	7.0	9,813	6.7	62,669	5.5	55,179	4.8
10-14	1,967	3.0	1,873	2.9	9,055	6.2	8,649	5.9	61,107	5.4	54,016	4.7
15-19	2,033	3.2	1,940	3.0	8,009	5.5	7,624	5.2	56,960	5.0	51,142	4.5
20-24	2,053	3.2	1,972	3.1	7,001	4.8	6,660	4.6	53,441	4.7	49,029	4.3
25-29	2,110	3.3	2,033	3.2	6,099	4.2	5,784	4.0	49,970	4.4	46,370	4.1
30-34	2,088	3.3	2,020	3.2	5,045	3.4	4,735	3.2	46,307	4.1	43,447	3.8
35-39	2,341	3.7	2,295	3.6	4,081	2.8	3,835	2.6	42,075	3.7	39,990	3.5
40-44	2,246	3.5	2,267	3.5	3,310	2.3	3,183	2.2	36,020	3.2	34,355	3.0
45-49	2,170	3.4	2,230	3.5	2,625	1.8	2,596	1.8	30,415	2.7	29,099	2.5
50-54	2,084	3.3	2,170	3.4	2,047	1.4	2,080	1.4	25,279	2.2	24,273	2.1
55-59	2,063	3.2	2,145	3.3	1,667	1.1	1,726	1.2	20,409	1.8	19,770	1.7
60-64	1,697	2.6	1,779	2.8	1,360	0.9	1,388	1.0	16,005	1.4	15,880	1.4
65-69	1,208	1.9	1,326	2.1	980	0.7	1,001	0.7	11,952	1.0	12,289	1.1
70-74	1,110	1.7	1,350	2.1	629	0.4	660	0.5	8,135	0.7	8,804	0.8
75+	2,081	3.2	3,416	5.3	544	0.4	610	0.4	7,773	0.7	9,286	0.8
Total	31,313	48.9	32,746	51.1	74,569	51	71,688	49.2	591,586	52	548,791	48
	64,059				146,257				1,140,377			

Data source: United States Census International Database, www.census.gov

INSTRUCTIONS:
 1) Select either FRANCE, INDIA, or NIGERIA

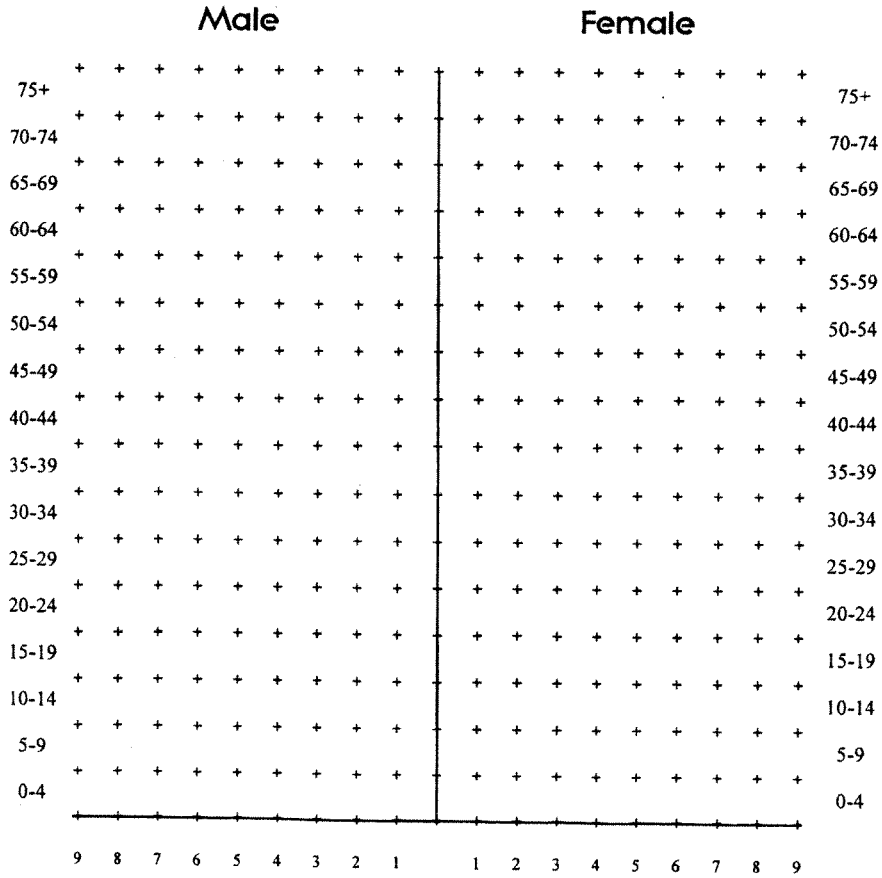
2) Graph the data from the table onto the blank graph.

3) when done move on to the next page.

Name: _____ Date: _____

Power of the Pyramids Graph Paper

Country: _____



Percentage of Population

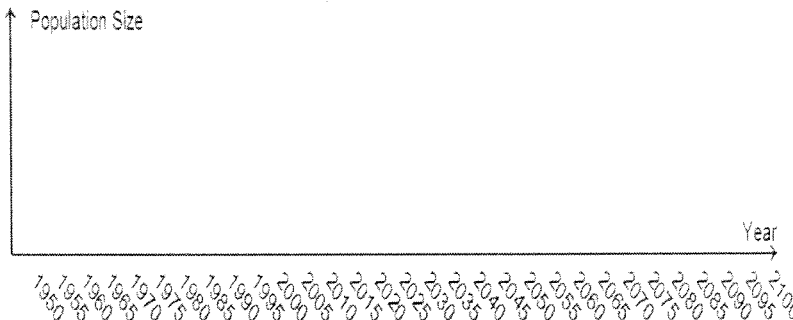
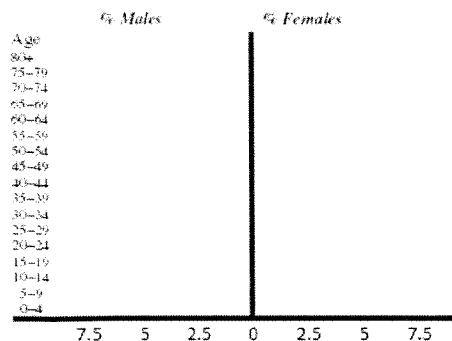
HUMAN POPULATION DYNAMICS

Name: _____

Many different factors affect the human population: historical population sizes, population distribution, fertility rates, growth rates, doubling times, and demographic transition. **Age-structure diagrams** act as indicators of future population trends.

PART I. AGE STRUCTURE DIAGRAMS – www.populationpyramid.net

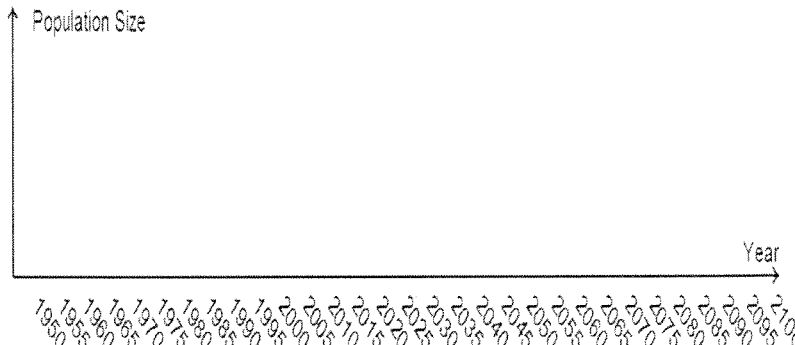
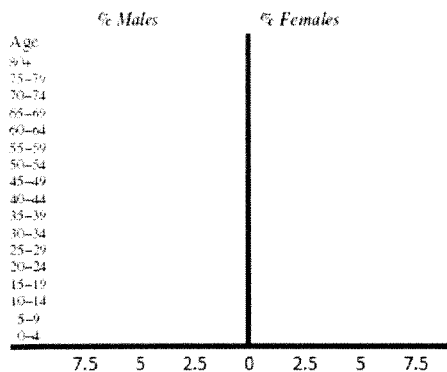
1) Find the world's age structure diagram and population growth curve. Make two small sketches here:



WORLD AGE STRUCTURE GRAPH

WORLD POPULATION GROWTH CURVE

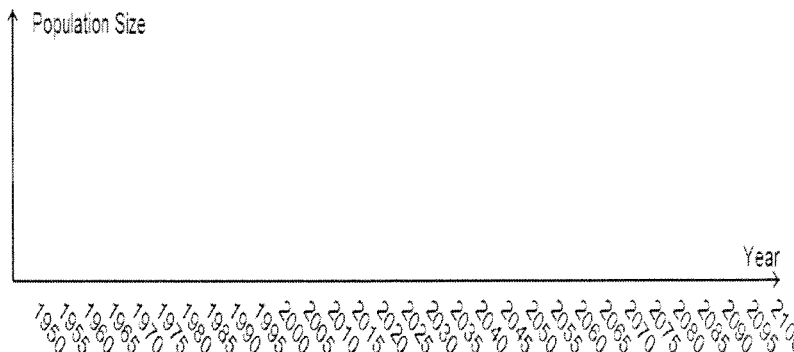
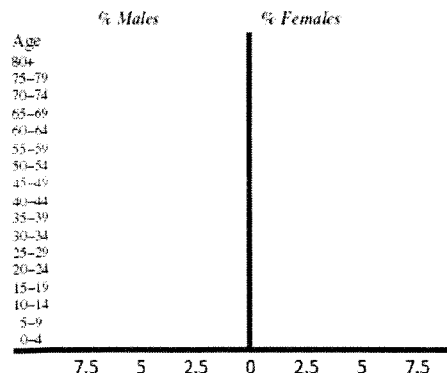
2) Find a country with nearly half of its population under the age of 20. Make a sketch of the age structure diagram as well as its projected population growth curve.



AGE STRUCTURE GRAPH

POPULATION GROWTH CURVE

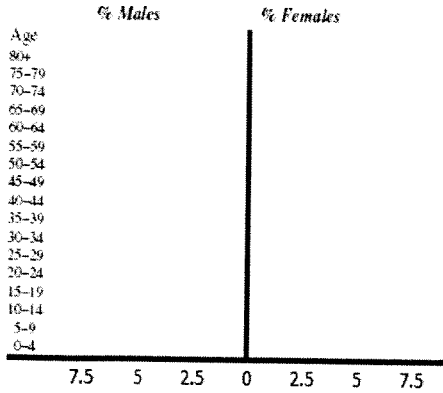
3) Find a country with a declining birth rate and a declining population. Make a sketch of the age structure diagram as well as its projected population growth curve.



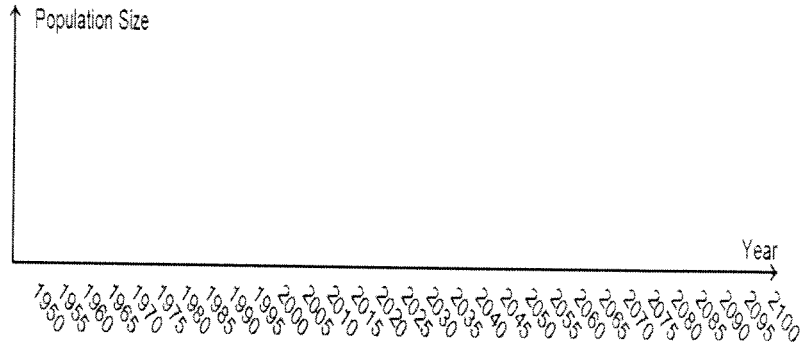
AGE STRUCTURE GRAPH

POPULATION GROWTH CURVE

4) Find a country with a high percentage of elderly in its population. Make a sketch of the age structure diagram as well as its projected population growth curve.

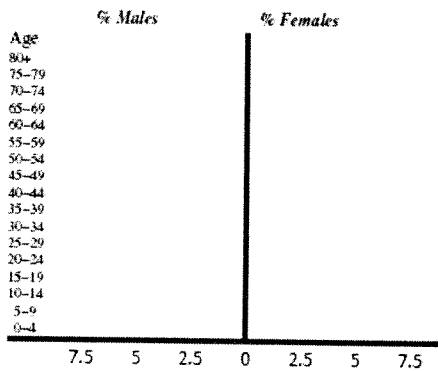


AGE STRUCTURE GRAPH

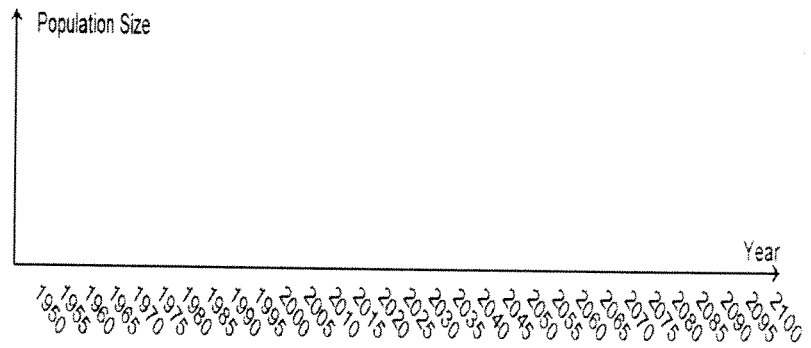


POPULATION GROWTH CURVE

5) Find a country with a stable population size (close to zero population growth). Make a sketch of the age structure diagram as well as its projected population growth curve.



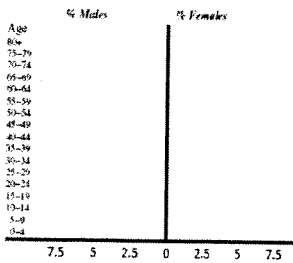
AGE STRUCTURE GRAPH



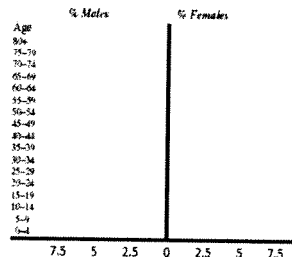
POPULATION GROWTH CURVE

PART II. FORECASTING POPULATION CHANGE – www.populationpyramid.net

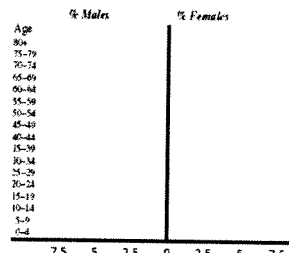
Find a country for each the following four age structure diagram shapes: pyramid, column, inverted pyramid, column with a bulge. Make a sketch of each example age structure diagram and provide the country name.



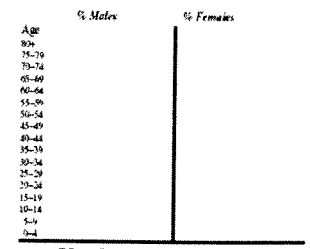
pyramid



column



inverted pyramid



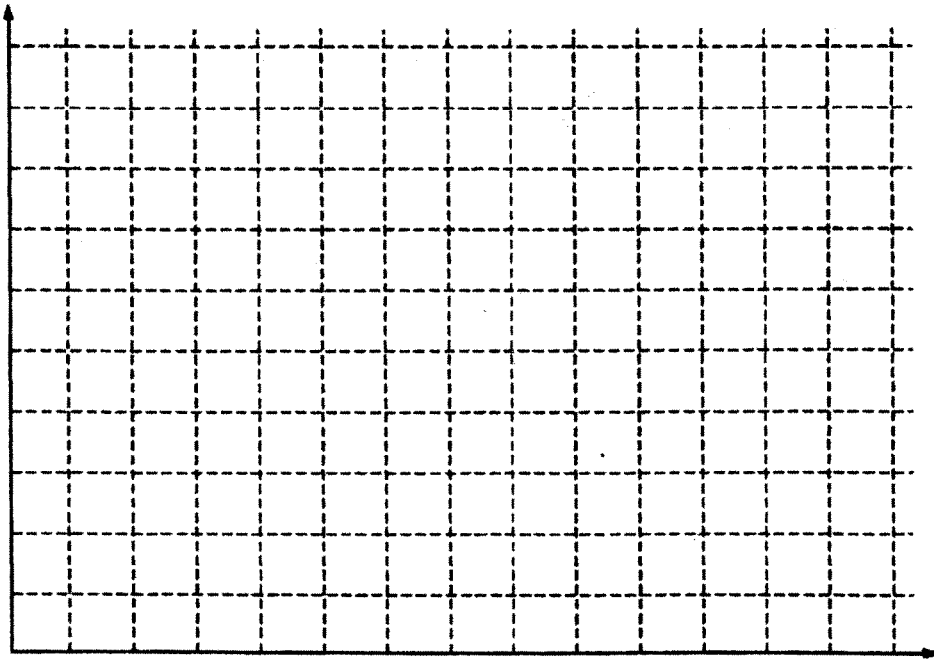
column with a bulge

- 7) Which type of age structure diagram is associated with a population with the potential to grow rapidly?
- 8) Which type of age structure diagram is associated with a population that is slowing down in growth?
- 9) Which type of age structure diagram is associated with a population that has some event in the past that caused a high birth rate or death rate for some group but not others?

2. A certain fictional country called Industria is tracking its population data. In 1855, the first year vital statistics were reported for the country, the population was 1.6 million, with a crude birth rate of 43 per 1,000. At that time the population of Industria was growing quite slowly, because of the high death rate of 41 per 1,000. In 1875 the population began to grow very rapidly as the birth rate remained at its 1855 level, while the crude death rate dropped dramatically to 20 per 1,000. Population growth continued to increase in the small country into the late 1800's, even though birth rates began to decline slowly.

In 1895 the crude birth rate had dropped to 37, and the death rate to 12 per 1,000. In that year (1895) a complete census revealed that the population of Industria had grown to 2.5 million. By 1950 population growth gradually began to decline as the death rate remained at its 1895 level, while the birth rate continued to decline to 22 per 1,000. In 1977 vital statistics revealed that the death rate was 10 per 1,000, and that population growth had slowed even more to an annual rate of 0.4%. By 1990 Industria had reduced its birth rate to that of its now constant, low death rate, and the population transition was complete.

- (a) On the axes below, plot the crude birth-rate data from 1855 to 1990. Now plot the crude death-rate data on the same axes. Clearly label the axes and the curves.



- (b) What was the annual growth rate of Industria in 1950? What was the birth rate in Industria in 1977?
- (c) Indicate TWO factors that might have accounted for the rapid decline in the death rate in Industria between 1855 and 1895. Indicate one specific reason why the birth rate might have been so high in 1855 and was so slow to decrease between 1855 and 1950.
- (d) Determine what the population size of Industria would have been in 1951 if the population had continued to grow at the annual rate of growth recorded for Industria in 1895.