

CDC 103 – Spring 2012
Population Size, Distribution and Composition
Population Change

Questions for Review

Part I: Population Size

Question 1:

The following data were extracted from the census data of the Banana Republic 2010:

Population	Number
Population of Age 20 (P_{20})	1,335,873
Population of Age 25 (P_{25})	1,115,735
Population of Age 30 (P_{30})	1,031,406
Population of Age 35 (P_{35})	827,883
Population of Age 40 (P_{40})	715,657
Population of Age 45 (P_{45})	516,270
Population of Age 50 (P_{50})	479,514
Population of Age 55 (P_{55})	344,552
Population of Age 60 (P_{60})	322,233
Population of Age 65 (P_{65})	218,875
Population of Age 70 (P_{70})	182,814
Summation of population from age 23 to age 62	23,844,399
Summation of population from age 20 to age 70	25,876,654
Total Population	60,559,116

Calculate the value of Wipple's index and comment on the results.

Question 2:

Despite the fact that the United Nations recommends a standard definition of urban, countries follow their own definitions of urban area:

- 1. What is the recommended United Nations definition of Urban**
- 2. List FIVE country definitions of urban and explain the definitions**

Question 3:

The size of the total population can be determined through the use of several different methods of data collection of census data. These methods include the **canvasser method** (by enumerators), **the householder method** (self-enumeration), and the **census station method**.

1. **Explain every method, and**
2. **State the advantages and disadvantages of each method**

Question 4:

Given the following data on the population of by broad age groups for South Africa and Spain in 2010:

Country	Broad Age Groups			Total
	0-14	15-64	64+	
South Africa	15,105,000	31,334,000	2,324,000	48,763,000
Spain	6,894,000	28,911,000	7,820,000	43,625,000

Calculate the following indicators:

1. (Total) Age Dependency Ratio
2. Child Dependency Ratio
3. Old Age Dependency Ratio
4. Comment on the results and compare between the two countries

Question 5:

The percentage distribution of the population by age groups for France and Uganda in 2010 is given in the table below:

Age Group	France	Uganda
0-4	7.0	19.3
5-9	6.7	16.0
10-14	6.4	13.1
15-19	6.5	11.0
20-24	7.0	9.1
25-29	7.0	7.4
30-34	6.7	5.9
35-39	7.4	4.6
40-44	7.5	3.3
45-49	7.5	2.5
50-54	7.2	2.0
55-59	7.0	1.8
60-64	6.7	1.4
65-69	4.5	1.1
70-74	4.1	0.7
75+	0.8	0.8
Total (%)	100.0	100.0
Total (N)	57,661,000	33,423,000

1. Compare the two percentage distributions of the two countries using the Index of Dissimilarity and the Index of Relative difference, and
2. Comment on the results

Part II: Population Change

Question 1:

Three problems are usually associated with the measurement of population change; change in territory, change in definition, and change in coverage:

- 3. Explain every problem IN DETAIL showing how every one of them affect measuring population change, and**
- 4. Support your answers with examples of each one of them.**

Question 2:

Using the following data on the population of Italy, Pakistan, and Uganda in 2000 and 2010:

Country	Population	
	July 1 st 2000	July 1 st 2010
Italy	56,986,000	60,551,000
Pakistan	144,522,000	173,593,000
Uganda	24,213,000	33,425,000

Calculate the following indicators:

1. Annual rate of change between 2000 and 2010 for each country using the geometric and the exponential methods.
2. The time required for the population to double for each country.
3. Compare and comment on the results.

Question 3:

Using the following data on the population of Denmark, Djibouti, and Egypt in 2000 and 2010:

Country	Population	
	July 1 st 2000	July 1 st 2010
Denmark	5,340,000	5,550,000
Djibouti	732,000	889,000
Egypt	67,648,000	81,121,000

Calculate the following indicators:

1. Annual rate of change between 2000 and 2010 for each country using the geometric and the exponential methods.
2. The time required for the population to double for each country.
3. Calculate the expected population of each country in July 1st, 2020 using the exponential growth model.
4. Compare and comment on the results.