## Demography Tutorial

Exercise 1:

## Consider the following two population pyramids

Population pyramid A


Source: U.S. Census Bureau [Internet]. Washington, DC: IDB Population Pyramids [cited 2004 Sep 10]. Available from: http://www. census.gov/population/international/.

Population pyramid B


Source: U.S. Census Bureau [Internet]. Washington, DC: IDB Population Pyramids [cited 2004 Sep 10]. Available from: http://www.census.gov/population/international/.

1. Describe the shape of each of these two pyramids. What are the most striking features in each?
2. What are the main differences in population composition between pyramid $\mathbf{A}$ and Pyramid B?
3. Based on the pyramid shapes, can you guess the level of development of each of these two countries?
4. What are the possible stages of demographic transition in each of country $A$ and country B?

## Exercise 2:

During which stage of demographic transition is population growth the highest? Explain why.

## Exercise 3:

The following data shows the population distribution of Saudi Arabia in 2000 and 2015.

| Age groups (years) | Year 2000 | Year 2015 |
| :--- | :--- | :--- |
| $<15$ | $\mathbf{8 0 0 0 0 0 0}$ | $\mathbf{7 0 0 0 0 0 0}$ |
| $15-<\mathbf{6 5}$ | $\mathbf{1 2 0 0 0 0 0 0}$ | $\mathbf{1 9 0 0 0 0 0 0}$ |
| $65+$ | $\mathbf{5 0 0 , 0 0 0}$ | $\mathbf{9 0 0 , 0 0 0}$ |

1. Calculate the dependency ratio in each of these two years.
2. During which year was it higher? Provide a plausible explanation.

## Exercise 4:

Consider the following hypothetical data.

| Age groups | No. of females <br> (mid-year) | Live births | ------- |
| :--- | :--- | :--- | :--- |
| $15-19$ | 100 | 8 |  |
| $20-24$ | 250 | 80 |  |
| $25-29$ | 200 | 96 |  |
| $30-34$ | 300 | 84 |  |
| $35-39$ | 200 | 40 |  |
| $40-44$ | 150 | 24 |  |
| $45-49$ | 250 | 20 |  |
| Total | 1450 | 352 |  |

1. Calculate the crude birth rate from this table.
2. Calculate the general fertility rate from this table.
3. Calculate the age-specific fertility rate for women from 20 to 34 years of age.

## Exercise 5:

1- What Strategies have been successful in reducing birth rates.
1 -

2-

2- Today $4 \%$ of the population is above 65 years in Saudi Arabia, This population portion will increase to $12 \%$ in 2040 , List three challenges and three solutions to deal with increase of the aging population in Saudi Arabia?

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CHALLENGES: SOLUTIONS:
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| :--- | :--- |
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Interactive population pyramid:
https://www.ined.fr/en/everything about population/population-games/tomorrowpopulation/

