The dependency ratio is a measure used to indicate the ratio of people in the "dependent" ("non-working, unproductive") ages (under 15 and ages 65 and older) compared to 100 people in the "economically productive" ages (15–64 years of age). The formula for the dependency ratio is:

\[
\text{Dependency ratio} = \frac{\% \text{ Population under age } 15 + \% \text{ Population age } 65+}{\% \text{ Population ages } 15-64} \times 100
\]

The dependency ratio for the U.S. is 49:100.

This means that there are 49 “dependent” people for every 100 “working” persons in the United States.

The (total) dependency ratio can be decomposed (disaggregated) into the child dependency ratio:

\[
\text{Child dependency ratio} = \frac{\% \text{ number of people aged } 0 - 14}{\% \text{ number of people aged } 15 - 64} \times 100
\]

AND the aged dependency ratio:

\[
\text{Aged dependency ratio} = \frac{\% \text{ number of people aged 65 and over}}{\% \text{ number of people aged 15 - 64}} \times 100
\]

Based on the above, calculate the overall, youth and aged dependency ratio for the ACTUAL (REAL LIFE, PRESENT DAY) countries represented by population pyramids X, Y and Z:

<table>
<thead>
<tr>
<th>Region</th>
<th>% pop &lt; 15 (A)</th>
<th>% pop &gt; 64 (B)</th>
<th>Total % dependent (A) + (B) = (C)</th>
<th>Productive population % (100% - C) = (D)</th>
<th>Overall Dependency ratio</th>
<th>Child dependency ratio</th>
<th>Aged dependency ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>26</td>
<td>8</td>
<td>34</td>
<td>66</td>
<td>51:100</td>
<td>39:100</td>
<td>12:100</td>
</tr>
<tr>
<td>MDCs</td>
<td>16</td>
<td>16</td>
<td>32</td>
<td>68</td>
<td>47:100</td>
<td>23:100</td>
<td>23:100</td>
</tr>
<tr>
<td>LDCs</td>
<td>29</td>
<td>6</td>
<td>35</td>
<td>65</td>
<td>54:100</td>
<td>45:100</td>
<td>9:100</td>
</tr>
<tr>
<td>Country X</td>
<td>35</td>
<td>5</td>
<td>40</td>
<td>60</td>
<td>67:100</td>
<td>58:100</td>
<td>8:100</td>
</tr>
<tr>
<td>Country Y</td>
<td>14</td>
<td>21</td>
<td>35</td>
<td>65</td>
<td>54:100</td>
<td>22:00</td>
<td>32:100</td>
</tr>
<tr>
<td>Country Z</td>
<td>9</td>
<td>40</td>
<td>49</td>
<td>51</td>
<td>96:100</td>
<td>18:100</td>
<td>78:100</td>
</tr>
</tbody>
</table>
According to the table you completed


2. In which country is the pressure to provide for nonproductive citizens the highest? Country Z

3. Which country has the “healthiest” (or lowest) overall dependency ratio? Country Y

4. Which country has the highest “aged dependency” ratio? Country Z

5. What socio-economic problems do regions with higher “aged dependency” ratios experience, be sure to provide specific examples to further explain your ideas (see Rubenstein p 59 – 60 and AP Crash Course p 42)?

STUDENTS SHOULD:

- mention of “burden” caring for the elderly
- gives 2 examples of “burden”
  - adequate levels of income (social security/pensions)
  - medical care (medicare/nursing homes, etc.)
- response is in complete answer format

6. Which country has the highest “child” or “youth” dependency ratio? Country X

7. What socio-economic problems do regions with high “child” or “youth” dependency ratios experience (see Rubenstein p 59 – 60 and AP Crash Course p 42)?

STUDENTS SHOULD:

- mention the “burden” of providing for too many children
- gives two examples of needed youth services
  - schools
  - hospitals
  - day-care centers
- explains future burden of the need to find jobs for youth after they leave school
- response is in complete answer format

8. Explain the “demographic trap” (google and read the Wikipedia explanation, it is acceptable. Or use the notes from my lecture, but answer the question in your own words in paragraph form without diagramming it. Make sure your answer reflects the “circular” nature of the trap otherwise it is incomplete).

Student response should:
- discuss high pop-growth, high CBR leading to high youth dependency which
  - leads to a strain on resources which
  - prevents investment in economic development which
  - results in an economy that is largely in the primary sector which
  - leads people to view children as economic assets and a society with low female empowerment which
  - reinforces high pop-growth/high CBR.