

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (15 points) If you go to <https://apps.who.int/gho/data/view.searo.61010?lang=en>, you will find the table used to calculate the life expectancy by age group for Mali. The life expectancy is the bottom part of the table. If you were a 70 year old male in Mali in 2019, then what age would you expect to live to be? Show all work. If you look at the life expectancy for children under 1 and children 1 to 5, something strange is happening. What is strange? How can it happen?

2) (30 points) Fill in the missing cells in the table. Show all work and write a one sentence explanation on how you got the numbers for each column.

Age	Proportion dying in the age interval	Number living at the beginning of age interval	Number dying during the age interval	Person-years lived in the age interval	Person-years lived in this and subsequent intervals	Years of life remaining (life expectancy)
<1	0.2	100,000				
1-5	0.1					
5-10	0.1				3,600,000	

3) (5 points) Your book is copyright 2013. It says that some people feel that there is a new fourth stage of epidemiological of transition. What is it? What event in the past few years supports that theory?

4) (20 points) What is HALE life expectancy? Why is it important? Explain one difficulty with calculating it.

5) (20 points) What is meant by “stunting”? Why is it common in developing countries? Why might it be hard to tell if it is happening?

6) (10 points) Explain the difference between morbidity and mortality.