Each problem is worth 5 points. For full credit provide complete justification for your answers.

1. [Based on Barnett, Ziegler, and Byleen p. 365 #63) The use of the insecticide DDT is no longer allowed in many countries because of its long-term adverse effects. If a farmer used 25 pounds of active DDT, assuming its half-life is 12 years, how much will still be active after:

(A) 5 years 18.73 pounds.

(B) 35 years 3.31 pounds.

(Round answers to 2 decimal places)

$$A = 25(.5)^{t/12}$$

Good

2. If the present population of Nigeria is 104 million people, and the population is expected to double every 23 years, what will the population be after:

(A) 10 years 141 million

(B) 50 years 469 million

(Round answers to the nearest whole number)

$$P = 104(2)^{t/23}$$

Great