Please return this page with your signature. Please write your name and student number at the spaces provided:

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Suppose you are given:

$$S_X(x) = \frac{1}{10}\sqrt{100 - x}, \quad \text{for } 0 \leq x \leq 100.$$

1. Construct the ℓ_x, d_x, q_x and p_x columns of the corresponding mortality table for ages 10, 11 and 12. Use a radix of 100,000.

2. Using the table above and assuming a constant force (exponential interpolation) over each year of age interval, calculate the following:

   (a) $d_{11.4}$

   (b) $_{0.25}q_{11}$

   (c) $_{1.5}p_{10}$

   (d) $\mu_{11.35}$