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In a certain population where 1/3 are females and 2/3 are males, the force of mortality for a female newborn is given by

$$\mu_x^{\mathrm{F}} = \frac{1}{2}x \quad \text{for } x \geq 0,$$

and that for a male newborn is

$$\mu_x^{\mathrm{M}} = \frac{8}{9}x \quad \text{for } x \geq 0.$$

For a randomly selected member of this population, calculate $_{1|2}q_3$ and interpret this probability.