Name: _____   **Student ID:** _____

Two life insurance policies issued to (45) are actuarially equivalent (that is, they have equal actuarial present values):

- A whole life insurance of 200 payable at the end of the year of death.

- A special whole life insurance, also payable at the end of the year of death, that pays 75 for the first 10 years but increases to an amount of b thereafter.

You are given:

- $A_{45} = 0.25$

- $A^{\,1}_{45:\overline{10|}} = 0.03$

Calculate the value of b.