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You are given the following information for Bill, now age 45, who just joined a DB pension plan:

- The plan provides a retirement pension of 2.5% of final average salary for each year of service. The final average salary is defined as the average salary in the two years before retirement.

- Retirement is at exact age 65.

- Bill's projected salaries in the two years preceding retirement are:

$$S_{63} = 148,000 \qquad S_{64} = 150,250$$
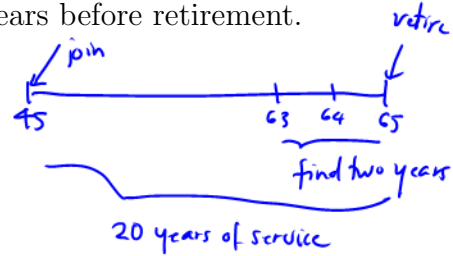
Calculate Bill's replacement ratio provided by his pension.

NOTE: Please submit your answers with a PDF file starting with your last name followed by an underscore and whatever else you wanna name it. For example, **Valdez_Quiz7.pdf**. Thank you and stay safe.

$$\text{Replacement Ratio} = R = \frac{\text{pension income}}{\text{salary just prior to 65}}$$

$$= \frac{.025 * 20 * \frac{1}{2}(S_{64} + S_{63})}{S_{64}}$$

$$= \frac{.025 * 20 * \frac{1}{2}(148000 + 150250)}{150250}$$

$$= 0.4962562 \approx \boxed{50\%}$$