

Calculating FICA Taxes

In this activity, students will learn to calculate FICA taxes by understanding the various components of Social Security and Medicare taxes and applying them to different income levels. By the end of this exercise, students will be equipped with the skills to calculate FICA taxes accurately and independently.

Part 1: How Much is FICA?

FICA is a payroll tax that is deducted from your pay stub. It includes two different taxes: Social Security and Medicare. Here are the FICA tax rates for an employee filing as a single individual:

- Social Security: 6.2% of your earnings up to \$160,200.
- Medicare: 1.45% of your earnings with an additional 0.9% tax on earnings above \$200,000

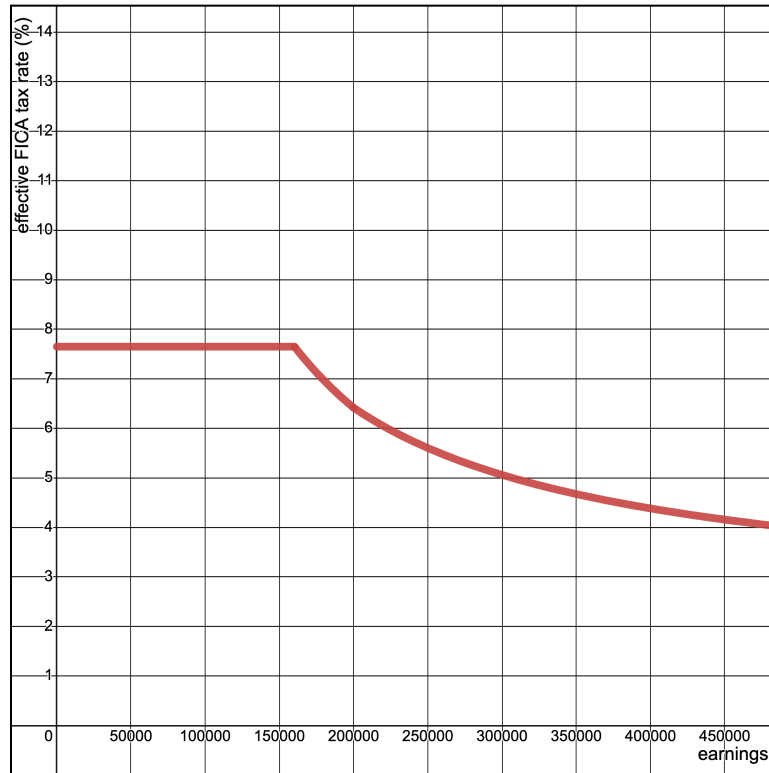
1. What is the maximum amount a single filer can pay in Social Security taxes?
2. Ari's taxable income is \$275,000. How much do they pay in Medicare taxes?
Note: The additional 0.9% tax only applies to income earned after meeting the \$200,000 threshold.
3. Write an equation for the marginal FICA tax rate as a function of your taxable income.
Note: Remember the marginal tax rate is the tax rate you pay on the last dollar you earned.
4. Write an equation for how much you will pay in total FICA taxes as a function of your taxable income (x).
5. Brie's taxable income is \$180,000. How much does she pay in total FICA taxes?

Part II: Effective Tax Rates for FICA

Because taxes can involve so many different thresholds and tax rates, we often look at the effective tax rate. The effective tax rate is the overall percentage of someone's income that they pay in taxes.

$$\text{Effective Tax Rate} = \frac{\text{Taxes Paid}}{\text{Taxable Income}}$$

The graph below shows the effective tax rate for FICA as a function of total earnings. Use the graph to answer the following questions.



6. What is $f(300,000)$? What does that mean in this context?
7. Is this function continuous or discontinuous? Explain how you know.
8. Why is the effective tax rate flat between $x = 0$ and approximately $x = 160,000$?
9. Describe the trend in the effective tax rate after $x = 160,000$.