

## TAX SKILLS

# Calculating Tax with Marginal Brackets

*Detailed practice, calculation, decision-making, and assessment*

| GRADES<br>9-12                                                                                                                                          | TIME<br>2 x 42 min | GROUPING<br>I / pairs / whole | PRODUCT<br>Explanation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|------------------------|
| <b>YOUR CHALLENGE</b> Move from income to taxable income, apply fictional marginal tax brackets by layer, and compare marginal and effective tax rates. |                    |                               |                        |

## Taxes Connect Paychecks and Annual Filing

A marginal bracket system applies different rates to different layers of taxable income. Reaching a higher bracket does not cause all taxable income to be taxed at that higher rate. Real calculations depend on the tax year, filing status, deductions, credits, and other rules.

| Term                                                                                                                                                                                                               | Student-friendly meaning                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Gross income                                                                                                                                                                                                       | Income before listed adjustments and deductions.        |
| Taxable income                                                                                                                                                                                                     | Amount used with the applicable tax calculation rules.  |
| Deduction                                                                                                                                                                                                          | Amount that may reduce taxable income under the rules.  |
| Tax bracket                                                                                                                                                                                                        | Range of taxable income assigned a rate.                |
| Marginal rate                                                                                                                                                                                                      | Rate applied to the last layer of taxable income.       |
| Effective rate                                                                                                                                                                                                     | Total tax divided by the income measure being analyzed. |
| <b>CLASSROOM USE</b> All people, employers, figures, brackets, and documents in this packet are fictional. Never place a real Social Security number, employer ID, bank number, or tax document in classroom work. |                                                         |

# Part 1 - Move from Gross Income to Taxable Income

Use this fictional simplified return. Do not apply real-year tax rules.

| Step                 | Amount   | Calculation | Result |
|----------------------|----------|-------------|--------|
| Wages                | \$42,000 | Given       |        |
| Interest income      | \$300    | Given       |        |
| Classroom adjustment | \$800    | Subtract    |        |
| Classroom deduction  | \$14,000 | Subtract    |        |
| Taxable income       |          |             |        |

Calculate taxable income. Explain why a deduction reduces taxable income rather than directly reducing tax dollar for dollar.

## Part 2 - Apply a Fictional Marginal Bracket Table

Classroom-only brackets: 10% of first \$12,000; 12% of next \$36,000; 22% above \$48,000.

| Taxable-income layer            | Amount in layer | Rate | Tax from layer |
|---------------------------------|-----------------|------|----------------|
| First layer: \$0-\$12,000       |                 | 10%  |                |
| Second layer: \$12,001-\$48,000 |                 | 12%  |                |
| Third layer: above \$48,000     |                 | 22%  |                |
| Total tax                       |                 |      |                |

Use taxable income from Part 1. Show why not every dollar is taxed at the highest rate reached.

### Part 3 - Compare Three Fictional Taxable Incomes

Use the same classroom brackets for every case.

| Taxable income | 10% layer | 12% layer | 22% layer | Total tax |
|----------------|-----------|-----------|-----------|-----------|
| \$10,000       |           |           |           |           |
| \$30,000       |           |           |           |           |
| \$55,000       |           |           |           |           |

Calculate each total. For \$55,000, only the dollars above \$48,000 use 22%.

# Part 4 - Calculate Marginal and Effective Rates

Use tax from the comparison table.

| Taxable income | Total tax | Marginal rate | Effective rate |
|----------------|-----------|---------------|----------------|
| \$10,000       |           |               |                |
| \$30,000       |           |               |                |
| \$55,000       |           |               |                |

Effective rate = total tax / taxable income. Why is the effective rate lower than the marginal rate for the \$55,000 case?

## Part 5 - Write a Marginal-Tax Explanation

Correct the claim: “If I enter the 22% bracket, all of my income is taxed at 22%.”

| Explanation check         | My evidence |
|---------------------------|-------------|
| Taxable income definition |             |
| Three income layers       |             |
| Tax from each layer       |             |
| Total tax at \$55,000     |             |
| Marginal rate             |             |
| Effective rate            |             |
| Corrected claim           |             |
| One real-world limitation |             |

Write 150-200 words for a student who has never seen tax brackets. Use the layer idea and at least three figures.

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