5.2 Graduated Income Tax

- Calculate a graduated income tax.
- Analyze a graduated income tax system.
- Compare a graduated income tax with a flat income tax.



Study Tip

When reading material about income tax rates, be sure you understand the definitions the writer is using. Income tax rates are an emotional issue, and writers may show their personal bias when writing about income tax policies.

Calculating a Graduated Income Tax

A **graduated tax** (or *progressive tax*) is a tax with a rate that increases as the taxable amount increases. In the United States, the federal income tax is a graduated tax, as are the income taxes in 36 states.

The table shows the graduated income tax for the taxable income (after deductions) of a single person in 2010. The rate for each taxable income bracket is called the **marginal tax rate**. The overall rate of tax that a person pays on his or her entire taxable income is called the **effective tax rate**.

| Taxable Income | Marginal Tax Rate | TREASURY |
|---------------------|-------------------|---------------------------------------|
| \$0-\$8375 | 10% | * * * * * * * * * * * * * * * * * * * |
| \$8376-\$34,000 | 15% | |
| \$34,001-\$82,400 | 25% | |
| \$82,401–\$171,850 | 28% | |
| \$171,851–\$373,650 | 33% | 7 |
| \$373,651+ | 35% | REVENUE |

EXAMPLE 1

Calculating a Graduated Income Tax

Use the table above to find the income tax and the effective tax rate for each taxable income.



b. \$1,000,000



\$34,000

\$67,850

SOLUTION

| | | А | В | Ü | |
|----------|---|-------------|----------|-------------|--|
| | | Taxable | Marginal | | |
| | 1 | Income | Tax Rate | Tax | |
| \$8375 | 2 | \$8,375.00 | 10% | \$837.50 | |
| \$34,000 | 3 | \$25,625.00 | 15% | \$3,843.75 | |
| ΨΟΨ,000 | 4 | \$33,850.00 | 25% | \$8,462.50 | |
| | 5 | \$67,850.00 | | \$13,143.75 | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| | 0 | | | | |

The effective tax rate is $\frac{13,143.75}{67,850.00} \approx 19.4\%$.

| | А | В | С |
|---|----------------|----------|--------------|
| | Taxable | Marginal | |
| 1 | Income | Tax Rate | Tax |
| 2 | \$8,375.00 | 10% | \$837.50 |
| 3 | \$25,625.00 | 15% | \$3,843.75 |
| 4 | \$48,400.00 | 25% | \$12,100.00 |
| 5 | \$89,450.00 | 28% | \$25,046.00 |
| 6 | \$201,800.00 | 33% | \$66,594.00 |
| 7 | \$626,350.00 | 35% | \$219,222.50 |
| 8 | \$1,000,000.00 | | \$327,643.75 |
| | | | |

The effective tax rate is $\frac{327,643.75}{1,000,000.00} \approx 32.8\%$.





Find the income tax and the effective tax rate for a taxable income of \$92,500.