## - Extending Concepts

Deductions and Credits In Exercises 23-28, use the information below. Assume the country has a flat income tax rate of $\mathbf{1 4 \%}$.

A tax deduction is an amount that is subtracted from your gross income before the tax rate is applied to determine your income tax liability. A tax credit is an amount that is subtracted from your income tax liability after the income tax rate has been applied.
23. A taxpayer has a gross income of $\$ 45,000$ and tax deductions of $\$ 10,000$. How much income tax does the taxpayer owe?
24. A taxpayer has a gross income of $\$ 65,600$ and tax deductions of $\$ 12,000$. How much income tax does the taxpayer owe?
25. A taxpayer has a taxable income of $\$ 68,500$ and tax credits of $\$ 3000$. How much income tax does the taxpayer owe?
26. A taxpayer has a gross income of $\$ 76,400$, tax deductions of $\$ 11,000$, and tax credits of $\$ 2000$. How much income tax does the taxpayer owe?

27. Which saves a taxpayer more, a tax deduction of $\$ 1000$ or a tax credit of $\$ 1000$ ?

Explain your reasoning.
28. Sketch a graph comparing income tax as a percentage of income for a $14 \%$ flat tax on all income and a $14 \%$ flat tax on all income over $\$ 12,000$. Explain how tax deductions can make a flat tax more progressive.

## Negative Income Tax In Exercises 29 and 30, use the information below. Assume the country

 has a flat income tax rate of $\mathbf{1 4 \%}$.Under a negative income tax system, deductions are subtracted from your gross income to determine your taxable income. If the difference is positive, the flat income tax rate is applied to determine how much income tax you owe. If the difference is negative, you receive a check from the government equal to the absolute value of the difference times the flat tax rate. Let the deduction for an adult be $\$ 14,000$ and the deduction for a dependent be $\$ 7000$.
29. A family of 2 adults and 2 dependents earns $\$ 40,000$.
a. Does the family owe income tax or receive a check from the government? What is the amount?
b. What is the cutoff amount for the family to qualify for a check from the government?
30. A family of 2 adults and 3 dependents earns $\$ 72,000$.
a. Does the family owe income tax or receive a check from the government? What is the amount?
b. What is the cutoff amount for the family to qualify for a check from the government?

