

1. A variation of this problem asks for net income (an after-tax amount) instead of operating income (a pretax amount).

$$\begin{aligned}\text{➤ Net income} &= \text{Operating income} - (\text{Operating income} \times \text{Tax rate}) \\ &= \text{Operating income} \times (1 - \text{Tax rate})\end{aligned}$$

$$\text{Operating income} = \text{Net income} \div (1 - \text{Tax rate})$$

- ✓ The calculation of the unit volume or sales dollars needed to produce a target net income is based on the same formulas used for target operating income.
- ✓ The only difference is that the target operating income is expressed in terms of related net income.

$$\text{➤ Target Sales (units)} = \{FC + \text{TNI}\} / (1.0 - \text{Tax Rate}) / \text{UCM}$$

Example:

John VicMan Manufacturing, Inc. has a product has a unit sales price of \$0.40 and a unit variable cost of \$0.20. Fixed costs are \$10,000. John VicMan wants to generate a \$30,000 net income. The effective tax rate is 40%.

Solution:

$$\begin{aligned}\text{Target Sales (units)} &= \{FC + [\text{TNI} / (1.0 - 0.40)]\} / \text{UCM} \\ &= [\$10,000 + (\$30,000 / 0.60)] / \$0.40 \\ &= \underline{\underline{150,000 \text{ units}}}\end{aligned}$$