

**Problem 11-26** *Effects of fixed and variable cost behavior on the risk and rewards of business opportunities*

LO 1, 2



Eastern and Western Universities offer executive training courses to corporate clients. Eastern pays its instructors \$5,310 per course taught. Western pays its instructors \$295 per student enrolled in the class. Both universities charge executives a \$340 tuition fee per course attended.

**Required**

- Prepare income statements for Eastern and Western, assuming that 18 students attend a course.
- Eastern University embarks on a strategy to entice students from Western University by lowering its tuition to \$220 per course. Prepare an income statement for Eastern, assuming that the university is successful and enrolls 36 students in its course.
- Western University embarks on a strategy to entice students from Eastern University by lowering its tuition to \$220 per course. Prepare an income statement for Western, assuming that the university is successful and enrolls 36 students in its course.
- Explain why the strategy described in Requirement *b* produced a profit but the same strategy described in Requirement *c* produced a loss.
- Prepare income statements for Eastern and Western Universities, assuming that 15 students attend a course, assuming that both universities charge executives a \$340 tuition fee per course attended.
- It is always better to have fixed than variable cost. Explain why this statement is false.
- It is always better to have variable than fixed cost. Explain why this statement is false.

**CHECK FIGURES**

- Western NI: \$810
- NI: \$2,610

**Problem 11-27** *Analyzing operating leverage*

LO 3, 4



Justin Zinder is a venture capitalist facing two alternative investment opportunities. He intends to invest \$1 million in a start-up firm. He is nervous, however, about future economic volatility. He asks you to analyze the following financial data for the past year's operations of the two firms he is considering and give him some business advice.



	Company Name	
	Ensley	Kelley
Variable cost per unit (a)	\$21.00	\$10.50
Sales revenue (8,000 units × \$28)	\$224,000	\$224,000
Variable cost (8,000 units × a)	(168,000)	(84,000)
Contribution margin	56,000	140,000
Fixed cost	(25,000)	(109,000)
Net income	<u>\$ 31,000</u>	<u>\$ 31,000</u>

**CHECK FIGURES**

- % of change for Kelley: 45.16
- % of change for Ensley: (18.06)

**Required**

- Use the contribution margin approach to compute the operating leverage for each firm.
- If the economy expands in coming years, Ensley and Kelley will both enjoy a 10 percent per year increase in sales, assuming that the selling price remains unchanged. Compute the change in net income for each firm in dollar amount and in percentage. (*Note:* Because the number of units increases, both revenue and variable cost will increase.)
- If the economy contracts in coming years, Ensley and Kelley will both suffer a 10 percent decrease in sales volume, assuming that the selling price remains unchanged. Compute the change in net income for each firm in dollar amount and in percentage. (*Note:* Because the number of units decreases, both total revenue and total variable cost will decrease.)
- Write a memo to Justin Zinder with your analyses and advice.

**Problem 11-28** *Determining the break-even point and preparing a contribution margin income statement*

LO 3, 6



Inman Manufacturing Company makes a product that it sells for \$60 per unit. The company incurs variable manufacturing costs of \$24 per unit. Variable selling expenses are \$12 per unit, annual fixed manufacturing costs are \$189,000, and fixed selling and administrative costs are \$141,000 per year.

**CHECK FIGURE**

- 13,750 units