

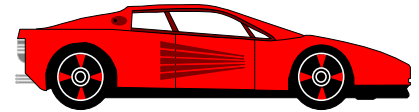
# PRINCIPLES OF FINANCIAL AND MANAGERIAL ACCOUNTING II

## Break-Even Analysis

### Objectives

1. determine the \_\_\_\_\_ point in dollars and in units \_\_\_\_\_
2. determine \_\_\_\_\_ net income \_\_\_\_\_
3. prepare a \_\_\_\_\_ chart \_\_\_\_\_
4. determine the margin of safety in dollars and as a ratio (percentage)
5. determine the \_\_\_\_\_ margin ratio \_\_\_\_\_

### The Break-Even Point



You paid \$5,000 for a car, drove it 6 months and sold it to a friend for \$5,000.

How did you do? You gained how much? \_\_\_\_\_

Definition: the level of sales at which total \_\_\_\_\_ is (exactly) \_\_\_\_\_ equal to total \_\_\_\_\_

Formula: \_\_\_\_\_

where Sales is \_\_\_\_\_

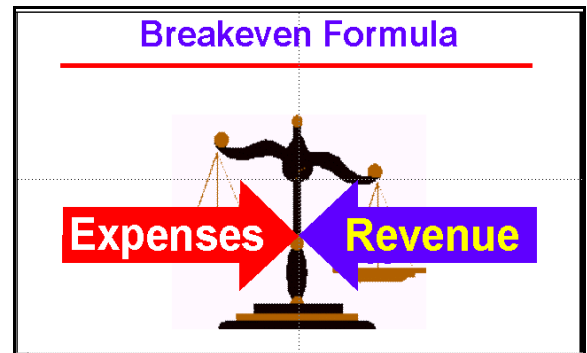
Fixed Costs are \_\_\_\_\_

and Variable Costs are a \_\_\_\_\_



This formula might be remembered as being like the \_\_\_\_\_ on

our aunt's or \_\_\_\_\_ coffee table.



Example to Illustrate the Break-Even Formula (also used throughout the class period)

Actual sales for Company A are \$200,000 (\$100 each), fixed costs (and expenses) are \$60,000 and variable costs (and expenses) are 60% of sales. Compute the break-even point in dollars.

Mathematical steps:
1. _____
2. _____
3. _____



Proof:

Income Statement	
Sales (at break-even)	\$ 150,000
Less: Variable Costs (60%)	90,000
Less: Fixed Costs	
Net Income	_____

Break-Even in UNITS:

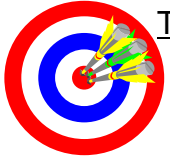


Do you want to break even?

Target Net Income -- What must sales be to increase net income by \$20,000?

Present net income:

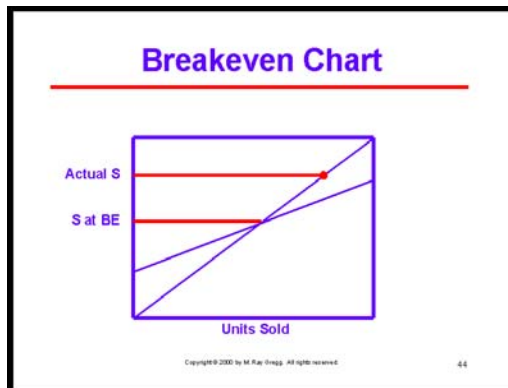
Sales		\$200,000
VC (60%)	\$120,000	
FC		180,000
Net Income		_____



## Target Net Income

### Break-Even Chart

### Margin of Safety



W, K, & K: "...is the difference between actual ... sales and sales at the break-even point." p. 1027

How "safe" are you?

RG & BE: "Margin of Safety" is the \_\_\_\_\_ actual sales over sales at the break-even point.

Continuing Previous Example

Actual sales for Company A are \$200,000 (\$100 each), fixed costs (and expenses) are \$60,000 and variable costs (and expenses) are 60% of sales. Current net income is \_\_\_\_\_ and sales at the break-even point are \_\_\_\_\_.  
Compute the margin of safety in dollars and as a ratio.

Remember?

Income Statement		
Sales		\$xx,xxxx
Less: Cost of Goods Sold		<u>xxx</u>
Gross Profit		\$xx,0000
$\frac{GP}{S}$	=	GP percentage
used to estimate goods destroyed in fire in Exercise E6-19, page 298.		

<b>Income Statement -- Variable Costing</b>		
Sales		\$xx,xxxx
Less: Variable Costs and Expenses		<u>xxx</u>
Contribution Margin		\$xx,0000

Contribution Margin Ratio

Actual sales for Company A are \$200,000 (\$100 each), fixed costs (and expenses) are \$60,000 and variable costs (and expenses) are 60% of sales. What is the contribution margin ratio?