

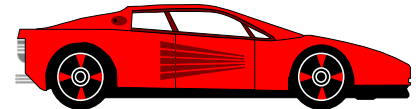
PRINCIPLES OF FINANCIAL AND MANAGERIAL ACCOUNTING II

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 _____

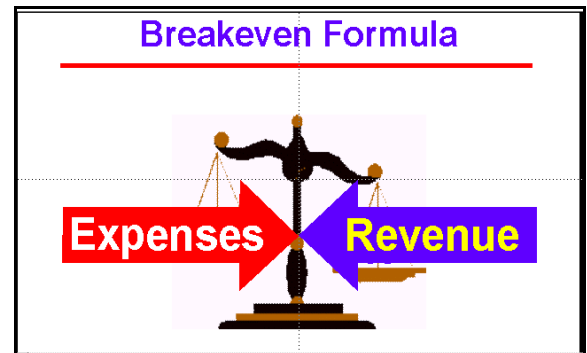
Fixed Costs are _____

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. _____



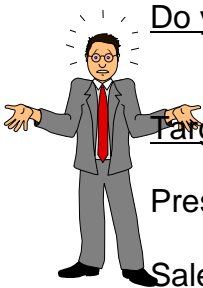
Proof:

Income Statement

Sales (at break-even)	\$ 150,000
Less: Variable Costs (60%)	<u>90,000</u>
<hr/>	
Less: Fixed Costs	<hr/>
Net Income	<u><u> </u></u>

Break-Even in UNITS:

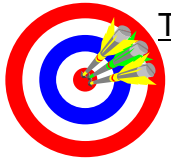
Do you want to break even?



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	<hr/>	<u>180,000</u>
Net Income		<u><u> </u></u>

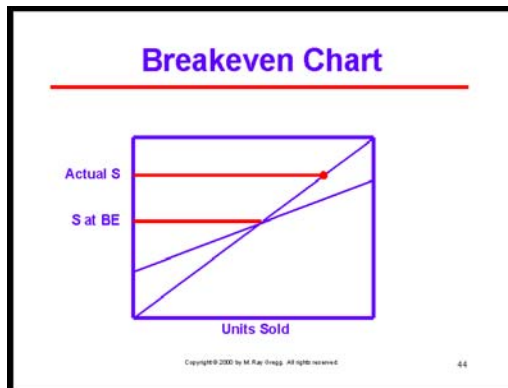


Target Net Income

Break-Even Chart



Margin of Safety



W, K, & K: "...is the difference between actual ... sales and sales at the break-even point." p. 946

How "safe" are you?

RG & CW: "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 E6-15, page 262.		

Income Statement -- Variable Costing		
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?