

ACG 2071 - Exam 3

Chapter 1 :: 1 conceptual question

<u>Financial Accounting</u> External Users Complies with GAAP Company-Wide Reporting Historical Reports prepared at the end of the Accounting Period	vs	<u>Managerial Accounting</u> Internal Users Non-GAAP Divisional/Departmental Recording Future Oriented Reports Prepared as Needed
---	----	--

Chapter 2 :: 3 questions, 1 conceptual

Variable costs: a cost that changes in total as the cost driver activity changes

Even though the ingredient price stays consistent, its total cost changes --

<u># cookies</u>	x	<u>cost/ingredient</u>	=	<u>Total costs</u>
100	x	\$0.50	=	\$50
500	x	\$0.50	=	\$250

The total costs varies

Fixed costs: a cost that remains constant in total as the cost driver activity changes

Insurance will remain a constant price, but when you allocate it to how many cookies are sold, it varies --

<u>Rent</u>	/	<u># of cookies</u>	=	<u>Rent cost per cookie</u>
\$1,500	/	5,000	=	\$0.30
\$1,500	/	1,500	=	\$1.00
\$1,500	/	3,000	=	\$0.50

Total cost remains fixed

Step costs: costs that remain constant for a small range of activity but change abruptly once beyond that range

A box of 500 bowls at \$50 per box:

If you need 5,200 bowls → so you need 10.4 boxes →

since you can't purchase a fraction of the box, you need to round up to suffice your needed amount of bowls →

so you order 11 boxes → therefore this is a step cost

Mixed costs: costs that have both a fixed component and a variable component

A phone bill: you are required to pay a flat fee every month just to have the company's services, then you pay additional charges for every minute of long-distance calling you make – the bill will be a combination of your flat (fixed) portion and your additional (variable) charges

High-low method: a cost estimation technique that uses the equation of a line ($y = mx + b$) and a data set's highest and lowest volume points to separate a mixed cost into its fixed and variable components

Δ = Difference or Change in the Cost and Activity

Select the two data points based on the highest and lowest activity

$$\frac{\Delta \text{ Cost}}{\Delta \text{ Activity}} = \frac{\$2,200 - \$1,600}{1,600 - 800} = \frac{\$600}{800} =$$

\$0.70

Income statement formats:

<u>GAAP Format</u>	vs	<u>Contribution Margin Format</u>
Sales		Sales
- <u>COGS</u> → DM, DL, V.OH, F.OH		- <u>VC</u> → DM, DL, V.OH, V.S+A
GM		CM
- <u>S + A</u> → Fixed & Variable		- <u>FC</u> → F.OH, F.S+A
Operating Income		Operating Income

DM = Direct Materials
V.OH = Variable Overhead
F.OH = Fixed Overhead

DL = Direct Labor
V.S+A = Variable Selling + Administration Expenses
F.S+A = Fixed Selling + Administration Expenses

Chapter 3 :: 4 questions, 1 conceptual

Breakeven analysis: calculating the point at which revenues are equal to expenses so income is equal to zero
There are two different ways to calculate breakeven point:

The Equation Method: sales – variable exp – fixed exp = operating income

$$\begin{aligned}
 \$3.00x - \$1.80x - \$4,000 &= \$0 \\
 \$1.20x - \$4,000 &= \$0 \\
 X &= \$4,000 / \$1.20 \\
 X &= 3,333 \text{ (number of cookies needed to breakeven)}
 \end{aligned}$$

Easiest way:
it's basically
a shortcut in
the Equation
Method

Op. Income is equal to
0 at breakeven point

Contribution Margin:

Fixed Expenses	=	Breakeven Point
CM per unit		(in units)
\$4,000 / \$1.20	=	3,333 (number of cookies needed to breakeven)

Margin of safety: the amount of sales that can be drop before losing money overall
(The difference between current sales and breakeven sales)

Current Sales	\$15,000
- Breakeven Sales	- \$10,000
Margin of Safety	\$5,000

Target operating income: finding the number of units that must be sold to earn a specific operating income
Calculate by using **The Equation Method** or **The Contribution Margin Technique**

$$\begin{aligned}
 \$3.00x - \$1.80x - \$4,000 &= \$20,000 \\
 \$1.20x - \$4,000 &= \$20,000 \\
 \$1.20x &= \$20,000 + \$4,000 \\
 X &= \$24,000 / \$1.20 \\
 X &= 20,000 \text{ (number of cookies needed to have desired op. inc.)}
 \end{aligned}$$

Using \$20,000 as the
target operating income

What-if analysis:

Changes in Sale Price per Unit: finding a new breakeven point using the equation method, substituting for the needed sell price

Sales – Variable Expenses – Fixed Expenses = Operating Income

$$\begin{aligned}
 \$2.60x - \$1.80x - \$4,000 &= \$0 \\
 \$0.80x - \$4,000 &= \$0 \\
 \$0.80x &= \$4,000 \\
 x &= \$4,000 / \$0.80 \\
 x &= 5,000 \text{ cookies}
 \end{aligned}$$

New price needed
to sell product

New total amount of products
needing to be sold to breakeven

Changes in Variable Costs per Unit: finding how the breakeven point would be affected if there is a change in the variable costs per unit

$$\text{Sales} - \text{Variable Expenses} - \text{Fixed Expenses} = \text{Operating Income}$$

$$\$3.00x - \$1.40x - \$4,000 = \$0$$

$$\$1.60x - \$4,000 = \$0$$

$$\$1.60x = \$4,000$$

$$x = \$4,000 / \$1.60$$

$$x = 2,500 \text{ cookies}$$

A lower variable cost per unit

New total amount of products needing to be sold to breakeven

Changes in Fixed Expenses: finding how the breakeven point would be affected if there is a change in the fixed costs

$$\text{Sales} - \text{Variable Expenses} - \text{Fixed Expenses} = \text{Operating Income}$$

$$\$3.00x - \$1.80x - \$4,500 = \$0$$

$$\$1.20x - \$5,000 = \$0$$

$$\$1.20x = \$5,000$$

$$x = \$4,500 / \$1.20$$

$$x = 3,750 \text{ cookies}$$

A higher fixed cost

New total amount of products needing to be sold to breakeven

Multiproduct CVP analysis: formula for whenever a ratio is involved with your data

Say you sell three times more of one product for every one sold of the other product (3:1 ratio)

$$(\text{sales} - \text{variable expenses}) + (\text{sales} - \text{variable expenses}) - \text{fixed expenses} = \text{operating income}$$

$$\text{CM} + \text{CM} - \text{fixed expenses} = \text{operating income}$$

For Cookies For Milk

$$(\$1.20 * 3x) + (\$1.40 * x) - \$4,000 = \$0$$

$$\$3.60x + \$1.40x - \$4,000 = \$0$$

$$\$5x - \$4,000 = \$0$$

$$\$5x = \$4,000$$

$$x = 800 \text{ milk cartons}$$

$$3x = 2,400 \text{ cookies}$$

Chapter 4 :: 2 questions, 1 conceptual

Cost flows through inventory accounts: (conceptual)

Raw materials: materials purchased for production that have not yet been used,

Work in Process: products that have been started but not yet finished, and

Finished Goods: products that have been completed but not yet sold

Each acct has a basis of → $\text{Beginning Balance} + \text{Costs added during the period} = \text{Costs removed during the period} = \text{Ending balance}$

Raw Materials Inventory		Work In Process Inventory		Finished Goods Inventory		COGS
Beg. Bal.	\$\\$ Used	Beg. Bal.	\$\\$ Used	Beg. Bal.	\$\\$ Sold	\$\\$ Sold
\$\\$ Purchases		DM		\$\\$ transferred		
Ending Balance		DL		Ending Balance		
		OH				
		Ending Balance				

Looking at the Cost flows through inventory accounts in their T-Accounts

Predetermined overhead rate: a rate used to allocate overhead costs to products as they're being made

$$\frac{\text{Estimated Total Overhead Costs}}{\text{Estimated Total Activity Level}} = \text{Predetermined Overhead Rate}$$