Thammasat University
Faculty of Economics
Bachelor of Economics (International Program)

AC201
Fundamental Accounting

Semester 1/2012

Course Materials

Topic:

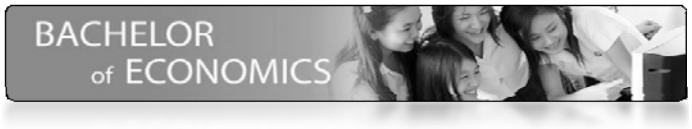
Chapter 08 Reporting and Interpreting Property, Plant, and Equipment; Natural Resources; and Intangibles

Session:

Sessions #8

Instructor:

Ajarn Santana Singhasaneh



CHAPTER 8: REPORTING AND INTERPRETING PROPERTY, PLANT, AND EQUIPMENT; NATURAL RESOURCES; AND INTANGIBLES

Ajarn Santana Singhasaneh
Department of Accounting
Thammasat Business School

Understanding The Business

Insufficient capacity results in lost sales.

Costly excess capacity reduces profits.

How much is enough?

Classifying Long-Lived Assets (1)

Actively Used in Operations

Expected to Benefit Future Periods

Tangible

Physical Substance

Intangible

No Physical Substance

Classifying Long-Lived Assets (2)

Land

Assets subject to ***depreciation***
- Buildings and equipment
- Furniture and fixtures

Natural resource assets subject to ***depletion***
- Mineral deposits & timber

Indefinite life:
- Trademarks
- Goodwill

Definite life:
- Patents
- Copyrights
- Franchises

Tangible

Physical Substance

Intangible

No Physical Substance

Fixed Asset Turnover

$$\text{Fixed Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Net Fixed Assets}}$$

This ratio measures a company's ability to generate sales given an investment in fixed assets.

The FY2010 ratio for Singapore Airlines is (dollars in millions):

Operating Revenues $12,707.3 ÷ [($15,063.9 + $15,992.4) ÷ 2] = 0.82 times

COMPARISIONS OVER TIME**			COMPARISONS WITH COMPETITORS	
Singapore Airlines			Delta	British Airways
FY2007	FY2008	FY2009	2009	FY2010
.91	.97	.99	1.37	1.13

Measuring and Recording Acquisition Cost

TAS 16 - Property, Plant, and Equipment

มาตรฐานการบัญชี ฉบับที่ 16 (ปรับปรุง 2552)

เรื่อง

ที่ดิน อาคารและอุปกรณ์

คำแถลงการณ์

มาตรฐานการบัญชีฉบับนี้ได้ปรับปรุงให้เป็นไปตามเกณฑ์ที่กำหนดขึ้นโดยมาตรฐานการบัญชีระหว่างประเทศ ฉบับที่ 16 เรื่อง ที่ดิน อาคารและอุปกรณ์ ซึ่งเป็นการแก้ไขของคณะกรรมการมาตรฐานการบัญชีระหว่างประเทศที่สิ้นสุดในวันที่ 31 ธันวาคม 2551 (IAS 16: Property, Plant and Equipment (Bound volume 2009))

Measuring and Recording Acquisition Cost (1)

When a PPE asset is acquired, the amount recognized for the PPE asset should be measured at its cost.

***Acquisition Cost* INCLUDES** the purchase price and all expenditures that are *reasonable* and *necessary* for getting the asset to the desired location and *ready for use*.

Buildings:

- Purchase price
- Renovation and repair costs
- Legal and realty fees
- Title fees

Measuring and Recording Acquisition Cost (2)

Equipment:

- Purchase price
- Installation costs
- Modification to building necessary to install equipment
- Transportation costs

Land:

- Purchase price
- Real estate commissions
- Title insurance premiums
- Delinquent taxes
- Surveying fees
- Title search and transfer fees

Land is not depreciated

Measuring and Recording Acquisition Cost (3)

Determining Cost: Example

A factory in Taiwan orders a machine from Germany at a list price of $100,000. Payment will be made in 48 monthly installments of $2,500, which include $20,000 in interest charges. Sales tax of $6,000 must be paid, as well as freight charges of $13,500. Installation and other set-up costs amount to $5,000. The cost of this machine to be recorded in the Machinery account is calculated as follows:

List price	$100,000
Sales tax	6,000
Transportation charges	13,500
Installation & set-up costs	5,000
Cost of machinery	$124,500

Acquisition cost does **NOT** include financing charges and cash discounts.

Acquisition for Cash & Debt

Recording Cost: Example

On January 1, Singapore Airlines purchased aircraft for $75,000,000 cash.

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Jan	1	Aircraft (+A)	75,000,000	
		Cash (-A)		75,000,000
		To record purchase of an aircraft.		

On January 1, Singapore Airlines purchased aircraft for $1,000,000 cash and a $74,000,000 note payable.

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Jan	1	Aircraft (+A)	75,000,000	
		Cash (-A)		1,000,000
		Note payable (+L)		74,000,000
		To record purchase of an aircraft.		

Acquisition for Noncash Consideration

Recording Cost: Example *(cont'd)*

Record at the current market value of the consideration given, or the current market value of the asset acquired, whichever is more clearly evident.

SINGAPORE AIRLINES

BOEING

On July 7, Singapore gave Boeing 1,000,000 shares of $1.00 par value common stock with a market valu of $50 per share plus $25,000,000 in cash for aircraft.

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Jan	7	Aircraft (+A)	75,000,000	
		Common stock (+SE)		1,000,000
		Additional Paid-in Capital (+SE)		49,000,000
		Cash (-A)		25,000,000
		To record purchase of an aircraft.		

Acquisition by Construction

Asset cost includes:

- All materials and labor traceable to the construction.
- A reasonable amount of overhead.
- Interest on debt incurred during the construction.

Repairs, Maintenance, and Additions

Type of Expenditure	Capital or Revenue Expenditure	Identifying Characteristics
Ordinary repairs & maintenance	Revenue Expenditure	1. Maintains normal operating condition 2. Does not increase productivity 3. Does not extend life beyond original estimate 4. Recurring in nature and involve small amounts of money at each occurrence
Additions & Improvement	Capital Expenditure	1. Major overhauls or partial replacements 2. Usually occur infrequently 3. Increases efficiency 4. May extend useful life 5. Involve large amounts of money

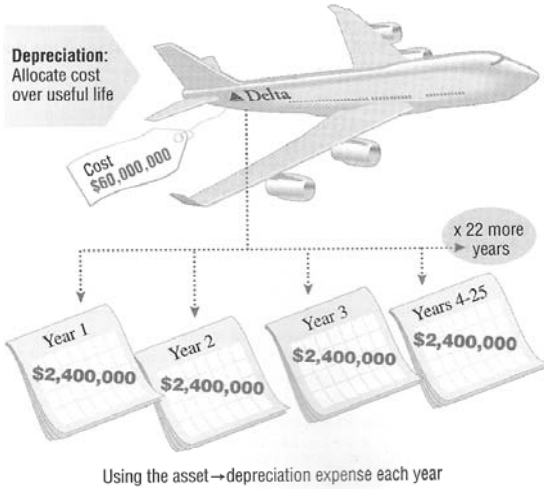
Depreciation

Depreciation Concepts (1)

Depreciation: Process of allocating the asset cost over their productive lives using a systematic and rational method.

Estimated useful life: The expected service life of an asset to the present owner.

Residual value: The estimated amount to be recovered at the end of the company's estimated useful life of an asset.



Using the asset→depreciation expense each year

Depreciation Concepts (2)

Depreciation is a cost allocation process that systematically and rationally matches acquisition costs of operational assets with periods benefited by their use.

Balance Sheet

Acquisition Cost
(Unused)

Cost Allocation

Income Statement

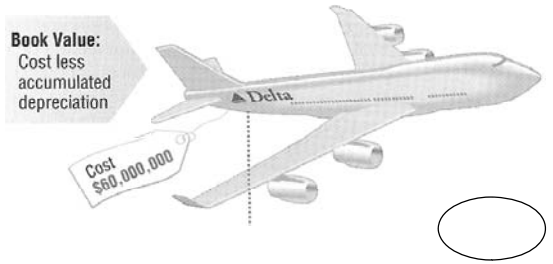
Expense
(Used)

Depreciation Expense	Depreciation for the current year	Income Statement
Accumulated Depreciation	Total of depreciation to date on an asset	Balance Sheet

Depreciation Concepts (3)

Book value: Difference between the balance of an asset and its related accumulated depreciation.

Accumulated depreciation: The contra asset account used to accumulate the depreciation recognized to date on plant assets.



	Year 1	Year 2	Year 3	Year 25
Cost	60,000,000	60,000,000	60,000,000	60,000,000
Less Accumulated depreciation	2,400,000	4,800,000	7,200,000	60,000,000
Net book value	$57,600,000	&55,200,000	$52,800,000	$0

Depreciation Methods

The calculation of depreciation requires three amounts for each asset:

1. Acquisition cost.
2. Estimated useful life.
3. Estimated residual value.

Alternative depreciation methods:

1. Straight-line
2. Units-of-production
3. Accelerated Method: Declining balance

Straight-Line Method (1)

$$\text{Depreciation Expense per year} = \frac{\text{Cost - Residual Value}}{\text{Useful Life in Years}}$$

At the beginning of the year, Singapore purchased ground equipment for $62,500 cash. The equipment has an estimated useful life of 3 years and an estimated residual value of $2,500.

$$\text{Depreciation Expense per year} = \frac{\$62,500 - \$2,500}{3 \text{ years}}$$

$$\text{Depreciation Expense per year} = \textbf{\$20,000}$$

Straight-Line Method (2)

Year	Depreciation Expense (debit)	Accumulated Depreciation (credit)	Accumulated Depreciation Balance	Undepreciated Balance (book value)
				$ 62,500
1	$ 20,000	$ 20,000	$ 20,000	42,500
2	20,000	20,000	40,000	22,500
3	20,000	20,000	60,000	2,500
	$ 60,000	$ 60,000		

Residual Value

SL

More companies use the straight-line method in their financial reports than all other methods combined.

Straight-Line Method (3)

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	20,000	
Year 1		Accumulated epreciation (+XA)		20,000
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	20,000	
Year 2		Accumulated epreciation (+XA)		20,000
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	20,000	
Year 3		Accumulated epreciation (+XA)		20,000
		To record depreciation exp for year 1		

Units-of-Production Method (1)

Step 1

$$\text{Depreciation Rate} = \frac{\text{Cost - Residual Value}}{\text{Life in Units of Production}}$$

Step 2

$$\text{Depreciation Expense} = \text{Depreciation Rate} \times \text{Number of Units Produced for the Year}$$

At the beginning of the year, Singapore purchased ground equipment for $62,500 cash. The equipment has a 100,000 mile useful life and an estimated residual value of $2,500.

If the equipment is used 30,000 miles in the first year, what is the amount of depreciation expense?

Units-of-Production Method (2)

Step 1

$$\text{Depreciation Rate} = \frac{\$62,500 - \$2,500}{100,000 \text{ miles}} = \$0.60 \text{ per mile}$$

Step 2

$$\text{Depreciation Expense} = \$0.60 \text{ per mile} \times 30,000 \text{ miles} = \$18,000$$

Year	Miles	Depreciation Expense	Accumulated Depreciation Balance	Undepreciated Balance (book value)
				$ 62,500
1	30,000	$ 18,000	$ 18,000	44,500
2	50,000	30,000	48,000	14,500
3	20,000	12,000	60,000	2,500
	100,000	$ 60,000		

Residual Value

Units-of-Production Method (3)

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	18,000	
Year 1		Accumulated epreciation (+XA)		18,000
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	30,000	
Year 2		Accumulated epreciation (+XA)		30,000
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	12,000	
Year 3		Accumulated epreciation (+XA)		12,000
		To record depreciation exp for year 1		

Accelerated Depreciation

Accelerated depreciation matches higher depreciation expense with higher revenues in the early years of an asset's useful life when the asset is more efficient.

	Depreciation Expense	Repair Expense
Early Years	High	Low
Later Years	Low	High

Declining-Balance Method (1)

Declining balance rate of 2 is double-declining-balance (DDB) rate.

Cost – Accumulated Depreciation

$$\text{Depreciation Expense} = \text{Net Book Value} \times \frac{2}{\text{Useful Life in Years}}$$

Annual computation ignores residual value.

At the beginning of the year, Singapore purchased equipment for $62,500 cash. The equipment has an estimated useful life of 3 years and an estimated residual value of $2,500.

Calculate the depreciation expense for the first two years.

Declining-Balance Method (2)

$$\text{Annual Depreciation Expense} = \text{Net Book Value} \times \frac{2}{\text{Useful Life in Years}}$$

Year 1 Depreciation

$$\$62{,}500 \times \frac{2}{3 \text{ years}} = \$41{,}667$$

Year 2 Depreciation

$$(\$62{,}500 - \$41{,}667) \times \frac{2}{3 \text{ years}} = \$13{,}889$$

Declining-Balance Method (3)

Year	Depreciation Expense (debit)	Accumulated Depreciation Balance	Undepreciated Balance (book value)
			$ 62,500
1	$ 41,667	$ 41,667	20,833
2	13,889	55,556	6,944
3	4,629	60,185	2,315
	$ 60,185		

Below Residual Value

Year 3 Depreciation

($62,500 - $55,556) x $\frac{2}{3 \text{ years}}$ = $4,629

Declining-Balance Method (4)

Year	Depreciation Expense (debit)	Accumulated Depreciation Balance	Undepreciated Balance (book value)
			$ 62,500
1	$ 41,667	$ 41,667	20,833
2	13,889	55,556	6,944
3	4,444	60,000	2,500
	$ 60,000		

Residual Value

Year 3 Depreciation

$6,944 - $2,500 = $4,444

Year 3 depreciation expense is limited to the amount that reduces book value to the estimated residual value of $2,500.

Declining-Balance Method (5)

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	41,667	
Year 1		Accumulated epreciation (+XA)		41,667
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	13,889	
Year 2		Accumulated epreciation (+XA)		13,889
		To record depreciation exp for year 1		

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
Dec	31	Depreciation expense (+E)	4,444	
Year 3		Accumulated epreciation (+XA)		4,444
		To record depreciation exp for year 1		

Measurement

International Perspective - IFRS

Measurement Basis for Property, Plant and Equipment

US GAAP and IFRS differ with respect to the measurement basis for property, plant and equipment on the balance sheet.

Under GAAP, revaluation of property, plant, and equipment to fair value is prohibited.

IFRS permit companies to value property, plant, and equipment at historical cost or to revalue them to their fair value as of the balance sheet date.

Measuring Asset Impairment

Impairment is the loss of a significant portion of the utility of an asset through…

- Casualty
- Obsolescence
- Lack of demand for the asset's services

The impaired asset should be written down resulting in a loss being recognized.

Disposal of Property, Plant and Equipment

Disposal of Property, Plant and Equipment (1)

Voluntary disposals:

- Sale
- Trade-in
- Retirement

Involuntary disposals:

- Fire
- Flood
- Accident

Disposal of Property, Plant and Equipment (2)

❶ Update depreciation to the date of disposal.

❷ Journalize disposal by:

- Recording cash received (debit) or cash paid (credit).
  - Writing off accumulated depreciation (debit).
- Recording a gain (credit) or a loss (debit).
  - Writing off the asset cost (credit).

Disposal of Property, Plant and Equipment (3)

If Cash > BV, record a gain (credit).
If Cash < BV, record a loss (debit).
If Cash = BV, no gain or loss.

Singapore Airlines sold flight equipment for $11,000,000 cash at the end of its 17th year of use.
The flight equipment originally cost $30,000,000 and was depreciated using the straight-line method with zero residual value and a useful life of 25 years.

Let's answer the following questions.

Disposal of Property, Plant and Equipment (4)

The amount of depreciation expense recorded at the end of the 17th year to bring depreciation up to date is:

a. $0.
b. $1,200,000.
c. $1,500,000.
d. $2,000,000.

Annual Depreciation:
= ($30,000,000 - $0) ÷ 25 Years
= $1,200,000

Disposal of Property, Plant and Equipment (5)

After updating the depreciation, the equipment's book value at the end of the 17th year is:

a. $9,600,000.
b. $20,400,000.
c. $12,800,000.
d. $6,600,000.

Accumulated Depreciation
= (17yrs. × $1,200,000)
= $20,400,000
BV = Cost - Accumulated Depreciation
BV = $30,000,000 - $20,400,000
= $9,600,000

Disposal of Property, Plant and Equipment (6)

The equipment's sale resulted in:

a. a gain of $1,400,000.
b. a gain of $6,200,000.
c. a gain of $3,800,000.
d. a loss of $1,700,000.

Gain = Cash Received - Book Value
Gain = $11,000,000 - $9,600,000 = $1,400,000

Disposal of Property, Plant and Equipment (7)

Prepare the journal entry to record Singapore's sale of the flight equipment at the end of the 17th year.

GENERAL JOURNAL				
Date		Account Titles and Explanation	Debit	Credit
		Cash (+A)	11,000,000	
		Accumulated depreciation (+XA)	20,400,000	
		Gain on Sale (+Gain, +SE)		1,400,000
		Aircraft (-A)		30,000,000
		To record sale of the flight equipment.		

STATEMENTS OF FINANCIAL POSITION

PRESIDENT BAKERY PUBLIC COMPANY LIMITED
As at 31 December 2011 and 2010

(Unit: Baht)

	NOTE	FINANCIAL STATEMENTS IN WHICH THE EQUITY METHOD IS APPLIED		SEPARATE FINANCIAL STATEMENTS	
		2011	2010	2011	2010
Assets					
Non-current assets					
Investment in joint venture	12	13,897,600	8,442,283	5,850,000	5,850,000
Other long-term investment	13	15,000,000	-	15,000,000	-
Property, plant and equipment	14	2,786,147,285	2,660,925,587	2,786,147,285	2,660,925,587
Advance payments for purchase of assets		29,022,722	15,347,413	29,022,722	15,347,413
Intangible assets	15	805,771	1,294,434	805,771	1,294,434
Leasehold rights	16	1,996,354	2,323,734	1,996,354	2,323,734
Other non-current assets		6,356,402	6,541,253	6,356,402	6,541,253
Total non-current assets		2,853,226,134	2,694,874,704	2,845,178,534	2,692,282,421
Total assets		4,320,190,258	3,765,063,406	4,312,142,658	3,762,471,123

The accompanying notes are an integral part of the financial statements.

6.6 Property, plant and equipment and depreciation

Land is stated at cost. Plant and equipment are stated at cost less accumulated depreciation. Depreciation of plant and equipment is calculated by reference to their costs on a straight-line basis over the estimated useful lives of assets, except for computer equipment acquired since 1 January 2002 calculated by double declining balance basis, as follows:

Buildings	-	10 - 20 years
Machinery and equipment	-	5 - 20 years
Computer equipment	-	3 - 5 years
Furniture and office equipment	-	5 years
Motor vehicles	-	5 years

No depreciation is provided on land, construction in progress and assets under installation.

Depreciation is included in determining income.

An item of plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

14. PROPERTY, PLANT AND EQUIPMENT

(Unit: Thousand Baht)

	Land	Building	Machinery and equipment	Furniture and office equipment	Motor vehicles	Construction in progress and assets under installation	Total
Cost							
31 December 2010	167,359	1,030,498	2,089,621	681,741	568,872	339,559	4,877,650
Additions			16,369	60,403	3,006	466,823	636,291
Transfers in (out)	-	9,397	636,179	44,718	87,246	(777,540)	-
Disposals	-	-	-	(22,562)	(11,745)	-	(34,307)
31 December 2011	167,359	1,039,895	2,742,159	754,300	647,379	28,542	5,379,634
Accumulated depreciation							
31 December 2010	-	206,466	1,112,163	500,387	397,709	-	2,216,725
Depreciation for the year	-	49,761	211,549	86,626	62,193	-	410,129
Depreciation - disposals	-	-	-	(21,976)	(11,391)	-	(33,367)
31 December 2011	-	256,227	1,323,712	565,037	448,511	-	2,593,487
Net book value							
31 December 2010	167,359	824,032	977,458	181,354	171,163	339,559	2,660,925
31 December 2011	167,359	783,668	1,418,447	189,263	198,868	28,542	2,786,147
Depreciation for the year							
2010 (Baht 281 million included in manufacturing cost, and the balance included in selling and administrative expenses)							3/4,400
2011 (Baht 311 million included in manufacturing cost, and the balance included in selling and administrative expenses)							410,129

As at 31 December 2011, the Company has equipment acquired under finance lease agreements, with net book value amounting to Baht 191 million (2010: Baht 162 million).

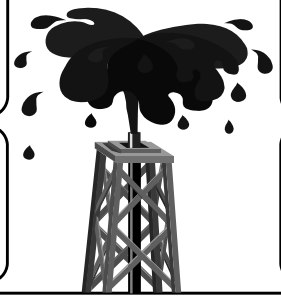
As at 31 December 2011, certain equipment items have been fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 1,153 million (2010: Baht 975 million).

Natural Resources

Acquisition and Depletion of Natural Resources (1)

Extracted from the natural environment.

A noncurrent asset presented at cost less **accumulated depletion**.



Total cost of asset is the cost of acquisition, exploration, and development.

Total cost is allocated over periods benefited by means of **depletion**.

Examples: oil, coal, gold

Depletion is like units-of-production depreciation.

Acquisition and Depletion of Natural Resources (2)

The unit depletion rate is calculated as follows:

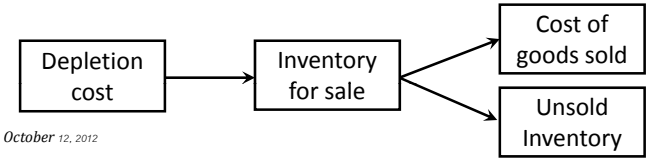
Step 1

$$\text{Unit Depletion Rate} = \frac{\text{Acquisition and Development Cost} - \text{Residual Value}}{\text{Estimated Recoverable Units}}$$

Depletion cost for a period is:

Step 2

$$\text{Depletion Cost} = \text{Unit Depletion Rate} \times \text{Number of Units Extracted during the Period}$$



Intangible Assets

TAS 38 - Intangible Assets

มาตรฐานการบัญชี ฉบับที่ 38 (ปรับปรุง 2552)
เรื่อง
สินทรัพย์ไม่มีตัวตน

คำแนะนำการบัญชี

มาตรฐานการบัญชีฉบับนี้เป็นไปตามเกณฑ์ที่กำหนดขึ้นโดยมาตรฐานการบัญชีระหว่างประเทศ ฉบับที่ 38 เรื่อง สินทรัพย์ไม่มีตัวตน พ.ศ. 2552 ซึ่งเป็นการแก้ไขของคณะกรรมการมาตรฐานการบัญชีระหว่างประเทศที่สิ้นสุดในวันที่ 31 ธันวาคม พ.ศ. 2551 (IAS 38: Intangible Assets (Bound volumn 2009))

Acquisition and Amortization of Intangible Assets (1)

Noncurrent assets without physical substance.

Often provide exclusive rights or privileges.

Intangible Assets

Useful life is often difficult to determine.

Usually acquired for operational use.

Record at current cash equivalent cost, including purchase price, legal fees, and filing fees.

Acquisition and Amortization of Intangible Assets (2)

Definite Life:
- Amortize over shorter of economic life or legal life, subject to rules specified by GAAP.
- Use straight-line method.

Indefinite Life:
- Not amortized.
- Tested at least annually for possible impairment, and book value is reduced to fair value if impaired.

Amortization is a cost allocation process similar to depreciation and depletion.

Acquisition and Amortization of Intangible Assets (3)

Goodwill

Occurs when one company buys another company.

Only purchased goodwill is an intangible asset.

The amount by which the purchase price exceeds the fair market value of net assets acquired.

Goodwill is NOT amortized. Its value must be reviewed at least annually for possible impairment, and the book value is reduced to fair value if impaired.

Acquisition and Amortization of Intangible Assets (4)

Arpec Company paid $2,000,000 to purchase all of Utek Company's assets and assumed liabilities of $400,000. The acquired assets were appraised at a fair value of $1,800,000.

What amount of goodwill should be recorded on Arpec Company books?

a. $200,000.
b. $400,000.
c. $600,000.
d. $800,000.

FMV of Assets	$ 1,800,000
Debt Assumed	400,000
FMV of Net Assets	1,400,000
Purchase Price	2,000,000
Goodwill	$ 600,000

Acquisition and Amortization of Intangible Assets (5)

Trademarks:

- A symbol, design, or logo associated with a business.
- An exclusive legal right to use a name, image or slogan.
- Purchased trademarks are recorded at cost.

Copyrights:

- The exclusive right to publish, use, and sell a literary, musical, or artistic work.
- Legal life is life of creator plus 70 years.
- Amortize cost over the period benefited.

Acquisition and Amortization of Intangible Assets (6)

Patents:

- Exclusive right granted by the federal government to sell or manufacture an invention.
- Cost is purchase price plus legal cost to defend.
- Amortize cost over the shorter of useful life or 20 years.
- Research and development costs that might result in a patent are normally expensed as incurred.

Technology:

- A category of intangible assets that includes a company's website and any computer programs written by its employees.

Acquisition and Amortization of Intangible Assets (7)

Franchises:

- Legally protected right purchased by a franchisee to sell products or provide services for a specified period and purpose.
- Purchase price is an intangible asset that is amortized.

Licenses and Operating Rights:

- Limited permissions to use a product or service according to specific terms and conditions.
- You may be using computer software that is made available to you through a campus licensing agreement.

Acquisition and Amortization of Intangible Assets (8)

Amortization is the allocation of the cost of intangible assets over its useful life in a systematic way.

Example:

On January 1, 2012, Company A purchased a patent from the inventor at a cost of $100,000. The patent has a remaining legal life of 10 years. However, the company estimates its useful life to be only 4 years.

GENERAL JOURNAL				
Date		Accounts Titles and Explanation	Debit	Credit
Jan	1	Patent (+A)	100,000	
		Cash (-A)		100,000
		To record purchase of patent for cash.		
Dec	31	Amortization expense - Patent (+E)	25,000	
		Accumulated amortization (+XA)		25,000
		To amortize cost of patent on a straight-line		
		basis over an estimated useful life of 4 years.		

International Perspective - IFRS

Measurement Basis for Property, Plant and Equipment

US GAAP and IFRS differ with respect to the treatment of development costs.

Under **US GAAP**, all research and development costs must be reported as an expense.

IFRS require that research expenditures be reported as an expense, but development costs be capitalized as an asset after technical and commercial feasibility of the resulting product or service have been established.

STATEMENTS OF FINANCIAL POSITION

PRESIDENT BAKERY PUBLIC COMPANY LIMITED
As at 31 December 2011 and 2010

(Unit: Baht)

	NOTE	FINANCIAL STATEMENTS IN WHICH THE EQUITY METHOD IS APPLIED		SEPARATE FINANCIAL STATEMENTS	
		2011	2010	2011	2010
Assets					
Non-current assets					
Investment in joint venture	12	13,897,600	8,442,283	5,850,000	5,850,000
Other long-term investment	13	15,000,000	-	15,000,000	-
Property, plant and equipment	14	2,786,147,285	2,660,925,587	2,786,147,285	2,660,925,587
Advance payments for purchase of assets		29,022,722	15,347,413	29,022,722	15,347,413
Intangible assets	15	805,771	1,294,434	805,771	1,294,434
Leasehold rights	16	1,996,354	2,323,734	1,996,354	2,323,734
Other non-current assets		6,356,402	6,541,253	6,356,402	6,541,253
Total non-current assets		2,853,226,134	2,694,874,704	2,845,178,534	2,692,282,421
Total assets		4,320,190,258	3,765,063,406	4,312,142,658	3,762,471,123

The accompanying notes are an integral part of the financial statements.

6.7 Intangible assets

Intangible assets are measured at cost on the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses.

Intangible assets with finite lives are amortised on a systematic basis over the economic useful life, except for computer software acquired since 1 January 2002 calculated by double declining balance basis, and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to profit or loss.

A summary of the intangible assets with finite useful lives is as follows:

	USEFUL LIVES
Computer software	5 years

15. INTANGIBLE ASSETS

Details of intangible assets, which are computer software, are as follows:

(Unit: Thousand Baht)

	2011	2010
Cost		
Balance - beginning of year	11,507	10,687
Additions	126	270
Transfer in	-	550
Balance - ending of year	11,633	11,507
Less: Accumulated amortisation	(10,827)	(10,213)
Net book value	806	1,294
Amortisation expenses included in the statements of comprehensive income for the year	614	966

End of Chapter 8

EXERCISE 8 – 1

DEPRECIATION METHODS AND GAIN/LOSS ON SALE

Joel Harvey Florists acquired a truck on January 1, 2007. The company paid $11,000 for the truck, $500 for destination charges, and $250 to paint the company name on the side of the truck. The company's accounting manager estimates the truck to have a five-year useful life and a residual value of $1,750. The truck is expected to be driven 100,000 miles in five years. It is actually driven 15,000 miles in 2007, 25,000 miles in 2008, 30,000 miles in 2009, 25,000 miles in 2010, and 5,000 miles in 2011.

Part 1
On January 1, 2007, how much should Joel Harvey Florist capitalize for the cost of the truck?

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2007				

Part 2
How much depreciation expenses that would be recorded for the years 2007 through 2011 using each of the following methods?

a. Straight-line

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2007				

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2008				

b. Unit-of-production

Year	Miles	Depreciation Rate	Depreciation Expense
2007			
2008			
2009			
2010			
2011			

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2007				

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2008				

c. Declining-balance

Year	Computation	Depreciation Expense	Accumulated Depreciation Balance	Net Book Value

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2007				

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2008				

Part 3

On December 31, 2011, Joel Harvey sold the truck for $3,000 cash. Compute the gain or loss on sale.

GENERAL JOURNAL				
Date		**Account Titles and Explanation**	**Debit**	**Credit**
2011				