

# ACCOUNTING FOR BUSINESS DECISIONS B

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## Week 0: Introductory

*In class:*

- ACCT Financial: Chapter 1 Exercise 6, Chapter 3 Exercise 12
- ACCT Managerial: Chapter 1 Problem 5

*Class Discussion Question:* Accounting is the 'language of business'. Explain what you think is meant by this statement.

## Tutorial 1: Introductory

**Financial accounting:** *the area of accounting primarily concerned with the **preparation and use of financial statements** by creditors, investors and other users outside the company*

1. Identify the accounts that are affected
2. Classify them by account category: assets, liabilities, equity, revenue, expenses
3. Determine the direction of the effect: is the account balance going up or down
4. Use your accounting rules to determine what to Dr and Cr
5. Confirm that debits = credits and accounting equation remains in balance

- **Assets:**

- Cash
- Short term investments
- Accounts receivable
- Notes receivable
- Inventory
- Supplies
- Repaid expenses
- Long term investments
- Equipment
- Buildings
- Land
- Intangibles

- **Liabilities**

- Accounts payable
- Accrued expenses
- Long term notes and bonds payable
- Taxes payable
- Unearned revenue
- Bonds payable
- Provisions

- **Shareholders equity**

- Contributed capital

- Retained earnings
- Revenues
  - Sales revenue
  - Fee revenue
  - Interest revenue
  - Rent revenue
- Expenses
  - COGS
  - Wage expense
  - Interest expense
  - Rent expense
  - Depreciation expense
  - Advertising expense
  - Insurance expense
  - Repairs expense
  - Income tax expense

### *The double entry accounting system*

- The dual entry nature of recording transactions is coded into **debits** (which are the **uses** of resources e.g. buying assets, paying expenses) and **credits** (which are the **sources** of resources e.g. borrowing money, issuing equity, earning revenue, using cash)
- Debits: left
  - ↑ in assets
  - ↑ in expenses
  - ↓ in liabilities
  - ↓ in equity
- Credits: right
  - ↑ in liabilities
  - ↑ in equity
  - ↑ in revenue
  - ↓ in assets
- Debits first, then credits
- Debits always = credits
- You cannot debit and credit the same account

### *The T-account*

- A T-account is a device or convention for organising and accumulating the accounting entries of transactions that affect an individual account, such as cash, accounts receivable, bonds payable or contributed capital
- Any combination affecting assets, liabilities and equity can occur, as long as the equation stays in balance
- Once all entries have been made, the balance in an account is determined by separately adding up all debits and all credits and subtracting the smaller total from the larger → leaving the difference as the account balance
- The left side of the account is known as the debit and the right side the credit.

- **Debit** (the use of the resource):
  - An increase in asset
  - A decrease in a liability
  - A decrease in shareholders' equity item
- **Credit:** (the source of the resource):
  - A decrease in an asset
  - An increase in a liability
  - A decrease in a shareholders' equity item

*Changes in account balances*

- In a dual-entry system, changes in account balances are recorded according to the following basic rules:
  - **To increase an account balance:** record transaction on the same side as the normal balance
  - **To decrease an account balance:** record transaction on the opposite side of the normal balance

Type of Account	Normal Balance	Record increases on	Record decreases on
Asset	Debit	Debit	Credit
Liability	Credit	Credit	Debit
Equity	Credit	Credit	Debit
Revenue	Credit	Credit	Debit
Expense	Debit	Debit	Credit
Dividend	Debit	Debit	Credit

Asset accounts		Liability and Equity accounts	
Record increases on debit side	Record decreases on debit side	Record decreases on credit side	Record increases on credit side
Balance			Balance
<b>Revenue accounts</b> When a company earns revenue, it increases its equity. Increasing an equity account requires a credit entry.		<b>Expense and dividend accounts</b> When a company incurs expenses or pays dividends, it is decreasing its equity. Decreasing equity requires a debit entry.	
Record decreases on debit side	Record increases on debit side	Record increases on credit side	Record decreases on credit side
	Balance	Balance	

## Week 1: Non-Current Assets

- Chapter 8 (Financial)

### *Recording, expensing and reporting non-current assets*

*Assets: a resource → resulting from a prior transaction → expected to be used in operations → in less than one year*

*Non-current assets: a tangible resource → resulting from a prior transaction → expected to be used in operations → for more than one year → and is not intended for resale e.g. land, buildings, equipment, furniture and fixtures*

- Non-current assets are recorded on the statement of financial position (balance sheet) and are classified as non-current assets because they are used for more than one year
- ‘not intended for resale’ → is what differentiates non-current assets from inventory (inventory is bought to be resold in some way; non-current assets are not)
  - e.g. a computer that Dell makes for sale is inventory; whilst an identical computer an employee uses in business operations is a non-current asset
- ‘used in the normal course of operations’ → is what differentiates non-current assets from an investment
  - e.g. land bought by a company to build a manufacturing plant is a non-current asset; whilst land bought to be sold to a developer is an investment

### *Recording non-current assets*

- Following the cost principle → non-current assets should be recorded at the cost of acquiring them
  - This **includes all costs incurred to get the asset delivered, installed and ready to use**, including:
    - Purchase price
    - Taxes paid on the purchase
    - Fees e.g. legal conveyancing costs
    - Delivery costs
    - Insurance costs during transit
    - Installation costs
- Example: Tendulkar building supply buys a delivery truck for \$60,000, additional stamp duty of \$3,600 and a heavy vehicle certification fee of \$400. Prior to receiving the truck, Tendulkar has the dealer paint the company’s logo on the doors and install a specialised GPS for \$1,000. Finally, Tendulkar pays an insurance company an additional \$1,400 in premiums (insurance = non-compulsory). Given the preceding items, the cost of Tendulkar’s truck is \$65,000 (This does not include insurance)

The entry to record the purchase of the truck is:

General Journal				
Date	Description	Debit		Credit
(Date)	Delivery truck	65 000		
	Cash			65 000
	Assets	=	Liabilities	+ Equity
	+65 000			
	-65 000			

Note: All the costs are grouped together into the asset 'Delivery Truck' EXCEPT non-compulsory insurance why not?

- ↓ asset (cash) = credit
  - ↑ asset (delivery truck) = debit
  - The reason insurance is not included is because it is not a **NECESSARY** cost that is needed to **get the asset into its condition and location for intended use**
    - It is therefore an expense, but it is not recorded at acquisition → rather, it is an operating expense as the insurance covers the truck during its operations over the year
- Expensing non-current assets i.e. recording depreciation*

- A non-current asset **converts to an expense as it is used or consumed**
  - The expensing of non-current assets is done through *depreciation*: *the process of systematically and rationally allocating the cost of a non-current asset over its useful life*
  - Depreciation is an application of the matching principle → because a **non-current asset is used to generate revenues period after period, some of it's cost should be expensed in, or matched to, those same periods**
- NOTE: depreciation in this sense is does not mean a depreciation in value (and therefore it's market value). Rather, it relates to a process of **allocating an asset's cost**
  - E.g. You buy a pair of shoes for \$200 expecting to wear them 200 times, expecting them to be worthless after this usage. After you wear them once, they might have a market value of \$100, but depreciation might only be \$1 if it's based on "use"
- Depreciation, however, only applies to those assets with *limited useful life*: *when the asset's revenue-generating potential is limited by wear and tear and/or obsolescence*
  - E.g. equipment, buildings
  - Not included: land, as it has unlimited useful life
- **Depreciation expense usually calculated at the end of an accounting period and recorded with an adjusted journal entry**
  - Regardless of the non-current asset being depreciated or the facts of the calculation → the general form of the entry is **depreciation expense increase** (expense ↑ = debit) **and accumulated depreciation increase** (contra asset ↑ = credit)

$$\text{Assets} = \text{liabilities} + \text{equity}$$

$$-10,000 \text{ (accumulated depreciation)} = \text{liabilities} - 10,000 \text{ (depreciation expense)}$$

- *Depreciation expense*: *the amount of expense recognised each period*

- Expense → therefore reported on the statement of comprehensive income (profit and loss statement)
- **Accumulated depreciation:** *The cumulative amount of depreciation expense recognised to date*
  - It is a contra asset account → meaning that it sits below the asset, and its accumulating balance is subtracted from the asset account to yield the carrying amount (net book value) of the non-current asset (explained more below)
  - The carrying amount therefore gets lower over time
  - Contra-asset account → therefore reported on the statement of financial position (balance sheet)

#### *Reporting non-current assets*

- Non-current assets are reported on the **statement of financial position**
- **Carrying amount:** *the unexpired cost of a non-current asset, calculated by subtracting accumulated depreciation from the cost of the non-current asset*

$$\text{Carrying Amount} = \text{Cost} - \text{Accumulated Depreciation}$$

- E.g. an asset costing \$5000 with \$1000 of accumulated depreciation would have a carrying amount of \$4000

#### *Calculating depreciation expense*

- When a company owns depreciable assets, it must calculate depreciation expense each period, which requires the following information about the asset:
  - **Cost:** *the historical cost of a non-current asset being depreciated*
  - **Residual/salvage value:** *an estimate of the value of a non-current asset at the end of its useful life*
    - It is the amount the company expects to receive when the asset is sold, traded in or scrapped
    - Cost – residual value = depreciable amount
  - **Useful life:** *the length of time a non-current asset is expected to be used in operations*
  - **Depreciation method:** *the method used to calculate depreciation expense e.g. straight line method, reducing balance method, units of activity method*

#### Example: Tendulkar Building Supply

- Purchase date: 1 January 2013
- Cost: \$65,000
- Estimated residual value: \$15,000
- Estimated useful life: 5 years or 100,000km

#### *Straight-line method*

**Straight-line method:** *a depreciation method → that results in the same amount of depreciation expense each year of the asset's useful life*

- i.e. it spreads the depreciation expense evenly over each year of the asset's useful life

$$\text{Depreciation Expense} = \frac{\text{Cost} - \text{Residual Value}}{\text{Useful Life}}$$

- $(65,000 - 15,000) / 5 = \$10,000$

### General journal

Date	Description	Debit	Credit
2013 30 June	Depreciation expense	10 000	
	Accumulated depreciation— Truck		10 000

- Thus, carrying amount after year 1 =  $\$65,000 - \$10,000 = \$55,000$

Year	Calculation	Depreciation expense	Accumulated depreciation	Carrying amount
			\$ 0	\$65 000
2013	$(\$65\ 000 - \$15\ 000) / 5$	\$10 000	\$10 000	\$55 000
2014	$(\$65\ 000 - \$15\ 000) / 5$	\$10 000	\$20 000	\$45 000
2015	$(\$65\ 000 - \$15\ 000) / 5$	\$10 000	\$30 000	\$35 000
2016	$(\$65\ 000 - \$15\ 000) / 5$	\$10 000	\$40 000	\$25 000
2017	$(\$65\ 000 - \$15\ 000) / 5$	\$10 000	\$50 000	\$15 000

On the above depreciation schedule, notice how the straight-line method:

- shows the same depreciation every year
- accumulated depreciation grows \$10 000 yearly until the balance equals the depreciable cost of the asset
- Carrying amount decreases \$10 000 yearly until it equals the salvage value estimated for the asset

### Reducing-balance method

**Reducing-balance method:** a depreciation method → that accelerates depreciation expense into the early years of an asset's life

- Thus, it results in **more depreciation expense in the early years of an asset's life**, and less depreciation expense in the later years of an asset's life
- Thus, it is thought to more accurately reflect the pattern of use and the **value of the benefit gained from the use** or using up of the asset than the straight-line method → as it records depreciation expense when the asset is most useful (i.e. before new technology, better models etc come into the market and the asset becomes less useful)

$$\text{Depreciation} = 1.5 \times \left( \frac{1}{\text{useful life}} \right) \times (\text{cost} - \text{accumulated depreciation})$$

i.e. 2x the straight-line rate (sometimes can use 1.5x straight line rate)  
straight line rate = 100 / useful life (%)

- Note that even though the calculation yields a different amount for the last year, depreciation expense is limited to whatever amount will correctly equal the correct accumulated depreciation and carrying amount
  - i.e. **the calculated amounts need to be struck through and replaced with the necessary amounts**

#### *Unit- of-activity method*

*Units-of-activity method: a depreciation method → in which depreciation expense is a function of the actual usage of the asset*

- Both the straight-line and reducing-balance methods are a function of the passage of time, rather than the **actual use of the asset**
  - Each method assumes that the calculated depreciation is a reasonable representation of the actual use of the asset
  - In contrast, the units-of-activity method of depreciation calculates depreciation based on actual asset activity
- Units-of-activity method relies on an estimate of an asset's lifetime activity (salvage value) → therefore the method is limited to those assets whose units of activity can be determined with some degree of accuracy

1. Calculate depreciation per unit of expected activity:

$$\text{Depreciation expense per unit} = \frac{\text{Cost} - \text{salvage value}}{\text{useful life in units}}$$

2. Multiply the per unit rate by the actual units of activity during the period:

$$\text{Depreciation expense} = \text{depreciation expense per unit} \times \text{actual units of activity}$$

#### *Comparing depreciation methods*

- Despite what depreciation method is chosen, the **depreciation expense will always be the same at the end of the asset's life**
  - However, each method arrives at that amount differently:
    - *Straight line*: depreciates the same amount each year
    - *Reducing-balance*: accelerates depreciation into the early years of the asset's life
    - *Units-of-activity*: depreciates different amounts each year depending on the asset's usage
- Not one method is particularly right → companies choose one over the other for a number of reasons:
  - E.g. taxes:
    - Like all tax deductible expenses, depreciation reduces taxable income → which in return reduces income taxes

- The advantage of the reducing-balance method is that more of the tax savings are realised in the early years → which is beneficial to a company because the company can temporarily use the cash that would otherwise be paid to the ATO

*Adjustments made during a non-current asset's useful life*

- Since non-current assets are used for multiple years, companies sometimes make adjustments as new information is available or as new activity occurs
- These adjustments can arise from the following:
  - Changes in estimates
  - Additional expenditures to improve the non-current asset
  - Declines in the asset's recoverable amount

*Changes in depreciation estimates*

- Calculating **depreciation expense** requires a company estimate the asset's **useful life** and **residual/salvage value**
  - These estimates are usually based on previous company experience with similar assets + manufacturer recommendations
  - They are therefore generally fair and reasonable
- However, estimates can differ from actual experience
  - Small + will not affect decision making → usually ignored
  - Large + materially wrong → revisions can be made i.e. change in estimate
- When an estimate is changed, the change is made prospectively → meaning **it only affects the calculation of current and future depreciation expense with that new estimate**. This is done through:
  1. Determining the remaining depreciable amount of the asset at the time of the revision
  2. Depreciating that cost over the remaining useful life using the same depreciation method
- Example: Thomas Supply
  - Purchases a machine for \$90,000 on 1 January 2013
  - Estimates a 10-year useful life
  - Estimates a \$10,000 residual value
  - Using straight line, he records a \$8000 depreciation expense  $[(\$90,000 - \$10,000) \times 10]$

General journal			
Date	Description	Debit	Credit
2013			
30 June	Depreciation expense	8 000	
	Accumulated depreciation—machine		8 000

Assets	=	Liabilities	+	Equity
-8 000				-8 000

- Now suppose that on 1 January 2017, Thomas decides that the machine will:

- Only last 8 years rather than 10
- Have a residual value of \$6000 rather than \$10000
- When these revisions are made, Thomas does not correct the previous depreciation expenses because they were based on reasonable estimates at the time. Instead, Thomas calculates the remaining depreciable amount of the asset and spreads it out over the remaining useful life

<b>Step 1</b>	<u>Calculate carrying amount revision time</u> Cost of the asset, 1 July, 2010 Less: accumulated <u>depn.</u> for four years Carrying amount on 1 July, 2014	\$90 000 \$32 000 <u>\$58 000</u>
<b>Step 2</b>	<u>Calculate depreciable cost for future depreciation:</u> Net book value on 1 July, 2014 Less: estimated residual value Remaining depreciable cost	<u>\$58 000</u> \$6 000 <u>\$52 000</u>
<b>Step 3</b>	<u>Calculate revised depreciation expense:</u> <u>\$52 000</u> ÷ 4 remaining years = <u>\$13 000 annual depn.</u>	

Dr Depreciation Expense (13,000), Cr Accumulated Depreciation (13,000)

Assets = Liabilities + Equity

- 13,000 = Liabilities - 13,000

- Thomas therefore depreciates \$8000 per year in years 1-4 and \$13,000 per year in years 5-8
  - This results in \$84,000 of total depreciation over the life of the asset, which is equal to the original cost of the asset less its revised residual value (\$90,000 - \$6000)

### *Expenditures after acquisition*

- Most non-current assets require expenditures throughout their useful lives
- The accounting treatment for expenditures made during the useful life of a non-current asset depends on whether it is either:
  - **Capital expenditure:**
    - Increases the expected useful life or productivity of the asset
    - Increases the asset value
    - E.g. mechanic a new engine
  - **Revenue expenditure:**
    - Maintains the expected useful life or productivity of the asset
    - Increases the expense account
    - E.g. mechanic for general repairs

### 1. Capital expenditure:

- Example:

- A company purchases a non-current asset for \$50,000 on 1/1/2013 with a 5-year life and no residual value
- During the fifth and final year, the company incurs \$8,000 for upgrades that extend the asset's life to 7 years from 5

### General journal

Date	Description	Debit	Credit
Year 5	Non-current asset	8 000	
	Cash		8 000
	(To record upgrade to asset)		

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} \\ + 8000 \text{ (non-current asset)} &= \text{Liabilities} + \text{Equity} \\ - 8000 \text{ (cash)} &= \text{Liabilities} + \text{Equity} \end{aligned}$$

Slides	Calculate net book value after capital expenditure:	
<b>Step 1</b>	Cost of the asset, 1 July, 2010	\$50 000
	Less: <u>Accum depn</u> for four years	\$40 000
	Net book value on 1 July, 2014	\$10 000
	Plus: Upgrades made in 2014	\$ 8 000
	Updated Carrying Amount for 2014	<b>\$18 000</b>
<b>Step 2</b>	Calculate depreciable expense:	
	Updated book value for 2014	<b>\$18 000</b>
	Less: Estimated salvage value	\$ 0
	Remaining depreciable cost	\$18 000
	Divided by remaining useful life	÷ 3
	Annual depreciation expense	\$ 6 000

## 2. Revenue expenditure:

- Example:
  - A company purchases a non-current asset for \$50,000 1/7/2010 with a 5 year life and no residual/salvage value
  - During the 5<sup>th</sup> and final year of the asset's life, the company incurs \$1000 in ordinary maintenance

## General journal

Date	Description	Debit	Credit
Year five	Maintenance expense	1 000	
	Cash		1 000
	(To record normal maintenance)		

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} \\ -1000 \text{ (cash)} &= \text{Liabilities} - 1000 \text{ (maintenance expense)} \end{aligned}$$

### *Asset impairment*

- Sometimes, a non-current asset's recoverable amount will fall substantially due to changing market conditions, technological improvements or other factors
- When a non-current asset's recoverable amount falls materially below its carrying amount, the asset is considered impaired
- Under AASB 136 → entities are required to write assets down from their carrying amount → to their recoverable amount (through use or sale)
- An impairment is an expense → that lowers the value of a non-current asset

Dr Impairment Expense – Land  
Cr Land (Non-current asset)

### *Disposing of non-current assets*

- When a company decides it no longer needs a non-current asset, it will dispose of it:
  - *No value:* discard
  - *Has value:* sell

The accounting for the disposal of a non-current asset consists of:

1. Record any necessary depreciation expense → to update the accumulated depreciation account
  2. Calculate gain or loss on the disposal → by comparing the asset's carrying amount to the proceeds from the sale, if any
    - Proceeds > carrying amount = gain on disposal
    - Carrying amount > proceeds = loss on disposal
  3. Record the disposal → through preparing a journal entry that decreases the asset account and its related accumulated depreciation account
    - If the asset is sold and cash received → the entry must also record the increase in cash
- Example:
    - Suppose a company purchases a machine on 1 January 2014 for \$30,000
    - The company estimates the useful life as 4 years and a residual value of \$2000
    - The company uses the straight-line method of depreciation and records depreciation expense annually on 31 December
    - Thus, depreciation expense for the machine is \$7000 each year  $[(30,000 - 2000) / 4]$

*Loss example*

- Suppose further the company sells the machine on 30 June 2015 for \$12,000
- 1. Record any depreciation expense to update the accumulated depreciation account:
  - The asset has been used for 6 months since the last time depreciation was recorded, so the company must record 6 months of depreciation expense
  - Annual = \$6000; half-yearly = \$3500

**General journal**

Date	Description	Debit	Credit
30 June	Depreciation Expense	3500	
2015	Accumulated Depreciation		3500

**Assets = Liabilities + Equity**

**-3500 (accumulated depreciation) = Liabilities - 3500 (depreciation expense)**

2. Calculate gain or loss on disposal
  - As a result of this entry, the accumulated depreciation account is updated to a balance of \$17,500 (\$7000 in 2013, \$7000 in 2014 and \$3500 in 2015)
  - With this balance, the gain/loss on disposal can be calculated as follows:

Proceeds from sale		\$12,000
Cost of machine	\$30,000	
Less: accumulated dep.	\$17,500	
Carrying amount a 30 Jun 2015		\$12,500
Loss on sale		\$ (500)

3. Record the disposal through a journal entry

**General journal**

Date	Description	Debit	Credit
30 June	Cash	12 000	
2015	Accumulated Depreciation	17 500	
	Loss on Disposal	500	
	Machine		30 000

**Assets = Liabilities + Equity**

**+12,000 (Cash) = Liabilities - \$500 (loss on disposal)**

**+17,500 (Accumulated Depreciation) = Liabilities + Equity**

**- \$30,000 (Machine) = Liabilities + Equity**

- The first entry decreases the machine account by \$30,000 to eliminate the account
  - This is because non-current assets are recorded and maintained at their costs, so the balance in the machine account is \$30,000 prior to disposal
- The second entry decreases accumulated depreciation by \$17,500
  - Because the company no longer has the asset, it should no longer maintain accumulated depreciation for the asset
- The third entry increases the cash account
  - Reflects the asset received from selling the machine
- The fourth entry increases a loss on disposal account
  - Reflects the loss on sale

### *Intangible assets*

*Intangible asset: a resource that is used in operations for more than one year but that has no physical substance*

- Intangible assets include:
  - **Patents:** a right to manufacture, sell or use a particular product or process exclusively for a limited period of time
  - **Trademark (trade name):** the right to use exclusively a name, symbol or phrase to identify a company
  - **Copyright:** the right to reproduce or sell an artistic or published work or software computer code
  - **Franchise:** the right to operate a business under the trade name of the franchisor
  - **Goodwill:** an intangible asset equal to the excess that one company pays to acquire the net assets of another company

### *Recording intangible assets*

- Like all assets, intangible assets are recorded at their acquisition costs
- 1. Externally acquired**
- E.g. suppose a company purchases a product patent from another company for \$100,000
  - Because the patent is purchased in an arm's length transaction with another company, the cost of the patent is the general purchase price
  - If an intangible asset is acquired through an external transaction → its cost is the purchase price
  - Goodwill: an intangible asset equal to the excess that one company pays to acquire the net assets of another company
    - Common example of an intangible asset that is created through an external transaction
    - E.g. Buyer Company purchases Seller Company for \$8m when the value of Seller's Company's net identifiable assets is \$6m. In this transaction, buyer Company pays \$8m and records \$6m of new assets and \$2m of goodwill

## General journal

Date	Description	Debit	Credit
30 June	Net Assets of Seller Company	6 000 000	
2015	Goodwill	2 000 000	
	Cash		8 000 000

$$\begin{aligned}
 &\text{Assets} = \text{Liabilities} + \text{Equity} \\
 &+ 6\,000\,000 \text{ (Net Assets)} = \text{Liabilities} + \text{Equity} \\
 &+ 2\,000\,000 \text{ (Goodwill)} = \text{Liabilities} + \text{Equity} \\
 &- 8\,000\,000 \text{ (Cash)} = \text{Liabilities} + \text{Equity}
 \end{aligned}$$

### *Amortising intangible assets*

*Amortisation: the process of spreading out the cost of an intangible asset over its useful life*

- Like non-current assets that are depreciated, intangible assets with limited useful lives are amortised
- Two examples of intangible assets with limited lives:
  - Patents: 20 years
  - Copyrights: 70 years
- Straight-line method for amortisation is usually used
- Example:
  - Suppose a company possesses a \$60,000 patent has the maximum legal life of 20 years
  - The company believes the patent will be useful for only 12 years and will then be worthless
  - Amortisation expense at the end of each year would be \$5000 ( $\$60,000 / 12$ ) and would be recorded as follows:

## General journal

Date	Description	Debit	Credit
End of year	Amortisation expense	5 000	
	Patent		5 000

$$\begin{aligned}
 &\text{Assets} = \text{Liabilities} + \text{Equity} \\
 &- 5,000 \text{ (Patent)} = \text{Liabilities} - 5,000 \text{ (Amortisation Expense)}
 \end{aligned}$$

# Formula Sheet

**Carrying Amount** = Cost – Accumulated Depreciation

**Straight Line Depreciation:**

- Depreciation Expense =  $(\text{Cost} - \text{Residual Value}) \div \text{Useful Life}$

**Reducing Balance Depreciation:**

- Depreciation Expense =  $2 * (1/\text{Useful life}) * \text{Carrying Amount}$

**Units-of-activity Depreciation:**

- Depreciation expense per unit =  $(\text{Cost} - \text{Salvage Value}) \div \text{Useful life in units}$
- Depreciation expense = Depreciation expense per unit \* Actual units of activity

**Calculate gain/loss on disposal/sale:**

- Sales Price – Carrying Amount = Gain/loss on sale