

Depreciation

What are the causes of Depreciation?

- **Wear and tear:** as assets are used overtime, they lose their value. This causes the asset to wear out.
- **Obsolete stocks:** when newer and better products come out, this reduces the demand for existing assets. E.g. computers/laptops/vehicles...

There are two ways to calculate depreciation:

- **1. Reducing balance method**
- **2. Straight line method**

The Straight Line

Method

- The simplest and most common method
- The net cost of an asset is written off in equal amounts over its life.

Purchase Cost

Expected life (years)

Example

A security system is bought for \$25,000 and is expected to last for 5 years (when it will be replaced).

What is the answer using this formula?

Straight Line Method at \$5,000 PA

Year End	Depreciation (\$)	Book Value (\$)
0	---	25,000
1	5,000	20,000
2		
3		
4		
5		

The Straight Line Method Continued...

The **residual value** is an estimate of the scrap/disposal value of the asset at the end of its useful life.

Many firms use a **zero residual value** – but this is unusual for a fixed asset to lose all its value.

Residual value – is the scrap value – how much the asset is worth at the end of its useful life.

So, using the same example....

A security system is bought for \$25,000 and is expected to last for 5 years (when it will be replaced).

If this system is supposed to fetch a second hand value of \$5,000 in five years time. Then we use this formula...

Purchase cost – Residual Value

Lifespan

Now calculate the annual depreciation using the above formula

Answer

Purchase cost – Residual Value

Lifespan

$(\$25,000 - \$5000)/5 \text{ years} = \$4,000 \text{ per annum}$

What is the difference between this and your first answer?

www.igcseaccounts.com

Straight Line Method at \$4,000 PA

Year End	Depreciation (\$)	Book Value (\$)
0	---	25,000
1	4,000	21,000
2		
3		
4		
5		

Answer

A fall of £1,000 in the depreciation charge each year when compared to the charge if there is no residual value.

Advantages and disadvantages of the straight line method

- ✓ It is simple
- ✓ Little calculation is needed and the same amount is subtracted from the book value each year.
- ✓ It is useful for assets like a lease, where the life of the asset and the residual value is known exactly.
- ✓ Encourages long term thinking
- ✗ Does not depreciate assets such as cars and machinery realistically, therefore leaves assets over-valued on the balance sheet.
- ✗ Unrealistic – assets depreciated by an equal amount every year.
- ✗ Relies heavily on guesstimates of an asset's future useful life and future residual value

The Reducing Balance Method

- This depreciates the value of an asset by a predetermined percentage.
- This reduces the value of the asset by a larger amount in the earlier years of its useful life.

Formula

**Reducing Balance Annual Depreciation
= Annual % X Net Book Value**

**Straight Line Annual Depreciation =
Annual % X Historic Cost**

**(Net Book Value =
Historic Cost – Cumulative Depreciation)**

Example

Same security system is bought for \$25,000 and expected to last for 5 years.

Suppose the company chose to use the reducing balance method to depreciate the security system at an annual rate of 25%

Fill in the rest of the table...

RB Method at 25% PA

Year End	Depreciation (\$)	Book Value (\$)
0	---	25,000
1	6,250	18,750
2		
3		
4		
5		

Advantages and disadvantages of the reducing balance method

- ✓ It takes into account that some assets, machinery for example, lose far more value in the first year than they do in the fifth, for example. This is because the heaviest depreciation is in the first year of an asset's life.
- ✗ It is more complicated to work out than the straight line method.
- ✗ Heavy first year depreciation may discourage investment in assets.