

IND AS 116 - LEASES

Suppose A Ltd has taken machinery on lease from B Ltd for 5 years.
 Lease rentals p.a. = ₹ 50000. Discount rate = 10%. Carrying amount = 200000

Lessee (A Ltd)

- Row asset
- Lease liability

If short term lease exemption or lease of low value exemption not taken then,

Row Asset Dr. 189539
 To Lease Liability 189539

B/Sheet

Lease Liability 189539 (+) Interest (14% p.a) 18954 (-) Payment (50000) Lease Liability (14% p.a) 158493	Row Asset 189539 less: Dep ⁿ every year over lease term on useful life (whichever is lower)
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Ind AS 16 PPE

Lessor (B Ltd)

- Should classify lease as either Finance lease or operating lease.

If classified as Finance lease (see)

Net Inv in the lease 189539
 P/L 10461
 To Machinery 200000

If classified as operating lease (Rent)

Continue to recognise machinery at CA.

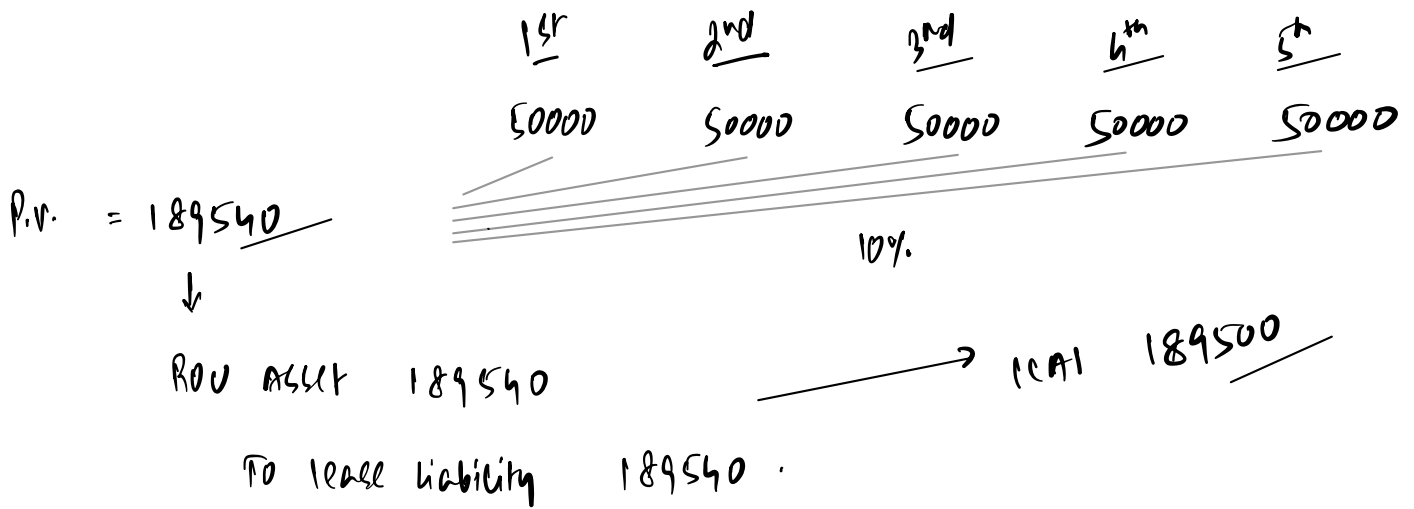
No Initial recognition.

LESSEE ACCOUNTING

Jagati Ltd enters into 5 years property lease arrangements with ICAR Ltd.

Lease payables every year = 50000 p.a.

Implicit rate of interest = 10%. Suggest accounting treatment.



Lease liabilities

Rounded off by ICAI

<u>Year</u>	<u>Initial value</u>	<u>Interest exp</u>	<u>Payment</u>	<u>Closing</u>
1	189500	18950	(50000)	158450
2	158450	15845	(50000)	124295
3	124295	12429	(50000)	86724
4	86724	8672	(50000)	45396
5	45396	4604	(50000)	-

\downarrow
 Round off

ROU ASSET

<u>Year</u>	<u>Initial value</u>	<u>Depⁿ</u>	<u>Closing value</u>
1	189500	37900	151600
2	151600	37900	113700
3	113700	37900	75800
4	75800	37900	37900
5	37900	37900	-

B/Sheet

Lease Liability	189500	ROU Asset	189500
(+) Interest Expenses (P/L)	18950	(-) Dep ⁿ 1 st ym (P/L)	(37900)
(-) Payments (Cash)	(50000)		<u>151600</u>
	<u>158450</u>	(-) Dep ⁿ 2 nd ym (P/L)	(37900)
(+) Interest Expenses (P/L)	15845		<u>113700</u>
(-) Payments (Cash)	(50000)		
	<u>124295</u>		
To be continued		To be continued	

0th ym

ROU Asset 189500
 To Lease Liability 189500

1st ym Qnd

1) Interest Expense 18950
 To Lease Liability 18950

2) Lease Liability 50000
 To Bank 50000

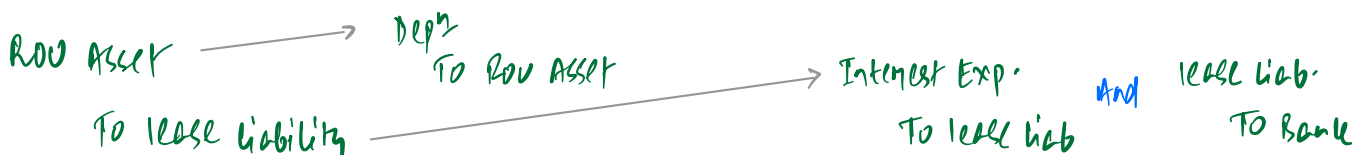
3) Depreciation 37900
 To ROU Asset 37900

Combined Entry (ICAI)

Interest Expenses 18950
 Lease Liability 31050
 To Bank 50000

Continue same 3 Entries in year 2, year 3, year 4 & year 5

Flow



Determining Lease term

E.g. Non cancellable period = 5 years, Extension option = 3 years.

At commencement date, lessee is reasonably certain to exercise extension option.

$$\therefore \text{Lease term} = (5 + 3) = \underline{8 \text{ years}}$$

If At commencement date, lessee is reasonably certain not to exercise extension option, then lease term will be 5 years.

E.g. Non cancellable period = 5 years.

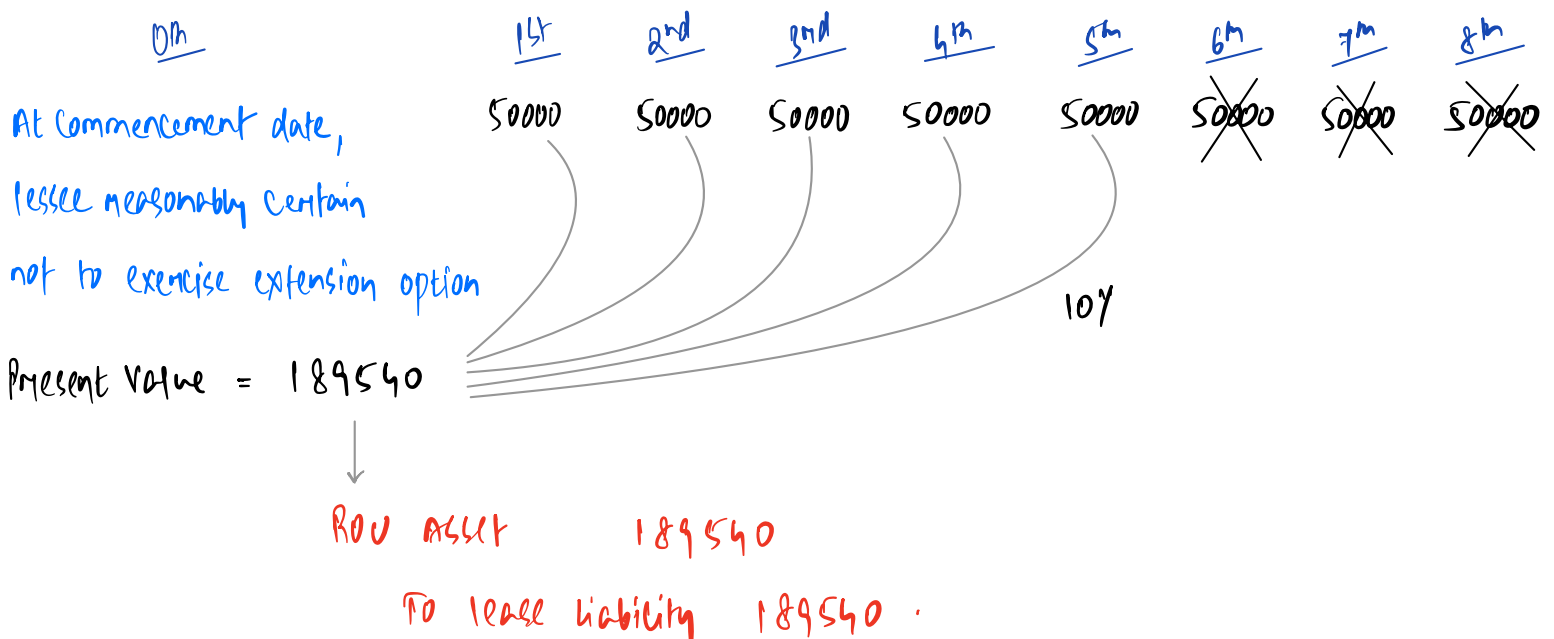
Termination option to cancel lease after 3 years.

If At commencement date, lessee is reasonably certain to exercise termination option, then lease term = 3 years. \leftarrow otherwise lease term = 5 years. \rightarrow

Lease term & Reassessment of lease term

E.g. Non cancellable period = 5 years, lease payment = 50000 p.a.

Discount rate = 10%, Renewal period of another 3 years at lessee's option.



At 2nd yr End (step 1)

C.A.
2nd yr end

$$\text{C.A. of lease liability} = 189540 + 18954 - 50000 + 15849 - 50000 = 124343$$

$$\text{C.A. of ROV Asset} = 189540 - 37908 - 37908 = 113724$$

Suppose at 2nd yr End, lessee incurred significant cost on leasehold improvement which now indicates that lessee is reasonably certain to exercise renewal option

$$\therefore \text{Total lease term} = (5 + 3) \text{ years} = 8 \text{ years.}$$

$$\text{Remaining lease term at 2nd yr End} = 6 \text{ years.}$$

2nd yr End	2nd	4th	5th	6th	7th	8th
⊙ R	50000	50000	50000	50000	50000	50000

$$\text{P.V.} = 217763$$

Revised discount rate (same) = 10%.

$$\therefore \text{Increase in liability} = 217763 - 124343 = 93420$$

↓

ROV Asset 93420

To lease liab. 93420

$$\therefore \text{Revised C.A. of lease liability} = 217763 \quad \langle 124343 + 93420 \rangle$$

$$\text{" " " ROV Asset} = 207144 \quad \langle 113724 + 93420 \rangle$$

B/Sheet

Lease liability	217763
(+) Interest Expense (P/L)	21776
(-) Payment (cash)	(50000)

ROV Asset 207144
(-) Depⁿ every year over 6 years.

Reassessment of purchase option

Non cancellable period = 5 years, lease rentals = 50000 p.a.

Discount rate = 10%, Purchase option at 5th yr end for ₹ 90000.

At commencement date, lessee reasonably certain not to exercise purchase option

<u>0th</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>
	50000	50000	50000	50000	50000
					90000

P.V. = 189540

ROU ASSET 189540

TO lease liability 189540.

At 2nd yr end

CA of lease liability = 189540 + 189540 - 50000 + 15849 - 50000 = 124343

CA of ROU ASSET = 189540 - 37908 - 37908 = 113724

At 2nd yr end, lessee reasonably certain to exercise purchase option

<u>2nd yr end</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>
₹	50000	50000	50000
			90000

P.V. = 191961

Revised discount rate (same) = 10%.

∴ Increase in liability = 191961 - 124343 = 67618

Journal

ROU ASSET 67618

TO lease liability 67618

B/Sheet

Lease liability	191961	ROU ASSET (113724 + 67618)	181342
(+) Interest Expense (PL)		(-) Dep ⁿ every year over 6 years.	
(-) Payment (cash)			

In Substance Fixed lease payments

E.g. Truck taken on lease for 5 years.

Consideration = £ 10 per km on £ 75000 p.a. whichever is higher.

It is expected that more than 10000 km will be driven every year.

<u>0m</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4m</u>	<u>5m</u>
	75000	75000	75000	75000	75000
P.V = 284309	10%				

B/sheet											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Lease liability</td> <td style="text-align: right;">284309</td> </tr> <tr> <td>(+) Interest Exp. (1st yr)</td> <td style="text-align: right;">28431</td> </tr> <tr> <td>(-) Payments (1st yr)</td> <td style="text-align: right; border-bottom: 1px solid black;">(75000)</td> </tr> <tr> <td></td> <td style="text-align: right; border-bottom: 1px solid black;">237739</td> </tr> </table>	Lease liability	284309	(+) Interest Exp. (1st yr)	28431	(-) Payments (1st yr)	(75000)		237739	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">ROU Asset</td> <td style="text-align: right;">284309</td> </tr> </table>	ROU Asset	284309
Lease liability	284309										
(+) Interest Exp. (1st yr)	28431										
(-) Payments (1st yr)	(75000)										
	237739										
ROU Asset	284309										

Suppose at 1st yr End, Actual km driven is 12000 km and Payment = £ 120000 (12000 x 10/km)

Journal (1st yr)

1.	Interest Expenses	28431	
	To Lease liability		28431
2.	Lease liability	75000	
	Lease Expense (PLU)	45000	
	To Bank		120000
3.	Depn	56862	
	To ROU Asset		56862

Lease Liab	75000	
To Bank		75000
Lease Exp (PLU)	45000	
To Bank		45000

E.g. Termination Penalties

Lease Rentals = 50000 p.a. , lease term = 5 years

lessee can terminate term after 3 years paying penalty of £ 10000.

At commencement date lessee **reasonably certain to terminate** after 3 years.

	<u>0th</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>
		50000	50000	50000	X	X
PV	131855			10000		
	↓					
	ROU Asset	131855				
		To Lease Liability	131855			

Comp of Lease Payments

It includes ÷

Fixed lease payments.

(+) In Substance Fixed lease payments.

(-) Incentive.

(+) Exercise price of Purchase option.

(+) Termination Penalties.

(+) Guaranteed Residual Value.

(+) **Variable lease payments that depends on Index or rate.**

At 2nd ym, lease Incentive receipt

from lessor = £ 10000

<u>0th</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
	50000	50000	50000
			(10000)
			40000

How to calculate ROU Assets

Lease liabilities (i.e. Present value of all lease payments)

(+) Any cash amount paid ,

(+) Initial Direct cost ,

(+) Directly attributable cost ,

(-) Any Incentive $\left\langle \text{Ignore it already adjusted in lease payments} \right\rangle$

(+) Present value of Dismantling

Ex. Machinery taken on lease for 5 years.

lease rentals p.a. = 50000 p.a., cash paid at 0th yr = 30000.

Incentive to be received at 2nd yr end = 15000.

Initial Direct cost incurred by lessee = 4000.

Dismantling cost to be incurred at 5th yr end = 25000

Discount rate = 10%.

50000 35000 50000 50000 50000
10%

Soln

	B/sheet		
Lease Liab $\left\langle 50000 \times PVIFA(10\%, 5\text{yrs}) \right\rangle$	189539	ROU Asset	✓ 189539
(-) Incentive $\left\langle 15000 \times PVIF(10\%, 2\text{nd yr}) \right\rangle$	(12397)	(-) Incentive	✓ (12397)
	177142	(+) Cash Paid	✓ 30000
Provision for Dismantling $\left\langle \frac{25000}{(1.10)^5} \right\rangle$	15523	(+) I.D.C.	4000
		(+) P.V. of Dismantling	15523
			<u>226665</u>
		Cash $\left\langle 30000 + 4000 \right\rangle$	(34000)

When to use original Discount rate and Revised Discount rates ?

Revised Discount rate $\left\langle \text{Control} \right\rangle$

1. Reassessment of lease term.
2. Reassessment of purchase option.
3. Modification.

Original Discount rate $\left\langle \text{No Control} \right\rangle$

1. Index on rate $\left\langle \text{E.g. CPI, Libor etc.} \right\rangle$
2. Residual value Guarantee
3. Variability resolved and In substance Fixed Payments determined.

Illustration 31 - Subsequent measurement using cost model (MTP May'20) 2-4 times practice

Company EFG enters into a property lease with Entity H. The initial term of the lease is 10 years with a 5-year renewal option. The economic life of the property is 40 years and the fair value of the leased property is ₹ 50 Lacs. Company EFG has an option to purchase the property at the end of the lease term for ₹ 30 lacs. The first annual payment is ₹ 5 lacs with an increase of 3% every year thereafter. The implicit rate of interest is 9.04%. Entity H gives Company EFG an incentive of ₹ 2 lacs (payable at the beginning of year 2), which is to be used for normal tenant improvement. Company EFG is reasonably certain to exercise that purchase option. How would EFG measure the right-of-use asset and lease liability over the lease term?

Year Beginning	Lease Rentals	P.V. Factor	Present Value
1st (0th)	500000	1	500000
2nd (1st)	315000 $\left(515000 - 200000 \right)$.917	
3rd (2nd)	530450 $\left(515000 + 3\% \right)$.841	
4th (3rd)	546363 $\left(530450 + 3\% \right)$.771	
5th (4th)	562754	.707	
6th (5th)	579637	.649	
7th (6th)	597026	.595	
8th (7th)	614937	.546	
9th (8th)	633385	.500	
10th (9th)	652386	.459	
11th (10th)	3000000	.421	
∴ Present value of all lease rentals.			<u>50,00,000 (Round off)</u>

Lease liability

	Initial value	Payments	Interest @ 9.04%	Closing value
1st	5000000	(500000)	406800	4906800
2nd	4906800	(315000)	415099	5006899
3rd	5006899	(530450)	404671	4881120
4th	to be continued till 10th year end -----			

4500000 x 9.04%



At commencement date, NO significant economic incentive to exercise renewal

Therefore lease term = 5 years. Assume lease payments at beginning.

0mym	1st	2nd	3rd	4th	5th
100000	100000	100000	100000	100000	100000
354595	Discount rate = 5%				
P.V. 454595					

ROU ASSET 454595
To lease liability 454595

lease liability

Initial value	Payments	interest	Closing Balance
454595 (1.1.01)	(100000)	17730	372325
372325 (1.1.02)	(100000)	13616	285491
285491 (1.1.03)	(100000)	9297	195238
195238 (1.1.04)			

ROU ASSET

Initial value	Depreciation	Closing Balance
454595	90919	363676
363676	90919	272757
272757	90919	181838
181838 (1.1.04)		

Remeasurement Date (1.1.04)

CPI Bebone = 120 , CPI today = 125

∴ Increase in CPI = 5 , Increase in CPI % = $\frac{5}{120} \times 100 = 4.167\%$

3 rd yr End	4 th yr End	5 th yr End	6 th yr End	7 th yr End	8 th yr End
100000	100000	110000	110000	110000	X
X 4.167%	X 4.167%	X 4.167%	X 4.167%	X 4.167%	
104167	104167	114583	114583	114583	
387216	Revised Discount Rate = 6%				
491383					

∴ Increase in Lease Liability = 491383 - 195238 = 296145

↳ ROU ASSET 296145
To Lease Liability 296145

How to Calculate Discount rates?

LESSOR ÷ Interest rate implicit in the lease is calculated and used as discount rates (No concept of Incremental Borrowing Rate)

LESSEE ÷ Interest rate implicit in the lease is calculated from the point of view of lessor and used as discount rates.
If Impracticable, then Incremental Borrowing Rate is used.

E.g.

Tagati Ltd (lessor) enters into contract with Yash (lessee) to lease Assets

Carrying Amount of Assets = 100000 (In the books of lessor)

Fair Value of Assets = 120000

Lease Payments = 50000 p.a. for 3 years.

Residual value expected at the end of 3rd yr = 35000

Residual value guaranteed by lessee (cash) = 25000

∴ Unguaranteed Residual value $\{35000 - 25000\} = 10000$

Initial Direct Cost incurred by lessor to enter into lease = 4000 (0m47)

Initial Direct Cost incurred by lessee to enter into lease = 2000 X

Calculate Interest rate implicit in the lease?

Soln

Interest rate implicit in the lease is calculated from the Point of view of lessor only.

	<u>0th</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
Fair Value =	120000	50000	50000	50000
(+I.D.C. =	4000			25000 GRV
	<u>124000</u>			10000 UGRV

∴ Interest rate implicit = 20.74%
(Trial and Error)

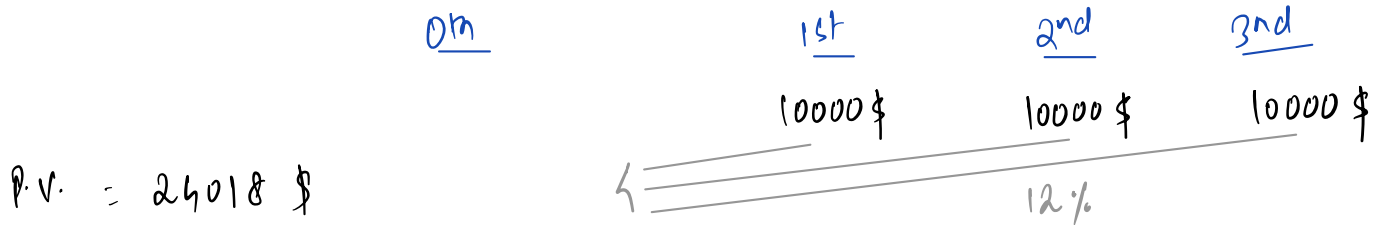
At 20% = 125578
At 21% = 123453
124000 (Target)
1578 (Gap at 20%)
2125 (Gap at 21%)

Gap 2125 ↓, Rate = 1% ↑
" 1 ↓, Rate = $\frac{1}{2125}$ % ↑
" 1578 ↓, Rate = $\frac{1}{2125} \times 1578$
= .74% ↑

∴ Interest rate Implicit = $20 + .74 = 20.74\%$

Leases denominated in Foreign Currency **

Jagati Ltd. (lessee F.C. = ₹) entered into lease arrangements with Elon Musk (F.C. = \$). Lease term = 3 years, lease rentals = 10000 \$ p.a.
 Discount rate (India) = 15%, Discount rate (US Environment) = 12%.



Suppose spot ₹/\$ = 50

∴ ₹ Value = 24018 × 50 = 1200900

ROU Asset 1200900
 To lease liability 1200900

1st yr End Interest Installments.
 Average rate (₹/\$) = 52, Closing rate (₹/\$) = 53

B/Sheet

Lease liability	24018 \$	50	1200900	ROU Asset	1200900
(+) Int. @ 12% on 24018 \$	2882 \$	52	149870	(-1 Dep ⁿ (1/3) (P/L)	(400300)
(-) Payments of \$ 10000	10000 \$	53	(530000)	C.A. at 1st yr End	<u>800600</u>
	16900 \$		820770		
(+) Exch. Loss (P/L) B-big			74930		
Closing liability	16900 \$	53	895700		

Remeasurement

1. Change in reasonably certainty

{ Extension option, Purchase option, Termination option } = Revised Discount rate

2. Change in Index or rate { CPI, LIBOR } = Original Discount rates.

3. Change in Expected Amount payable in Residual Value Guarantee → Same

4. Variability is resolved and becomes In substance Fixed Payments → Same

LEASE MODIFICATION

Change in Scope of the lease on Consideration of the lease. { Change in T & C }

Increase in Scope

i) Adding ROU Asset { 1000 sq. ft of space increased to 1500 sq. ft }

ii) Extending contractual lease term.



Increase in Scope on change in Consideration

1st step ÷ Carried forward of ROU Asset & lease liability at the date of modification

2nd step ÷ Remeasure lease liability using revised lease rentals and revised discount

3rd step ÷ Any increase/decrease in lease liability is adjusted with ROU Asset

Decrease in Scope { Disposal }

i) Terminating ROU Asset { 1000 sq. ft space reduced to 700 sq. ft }

ii) Shortening contractual lease term.



Decrease in Scope { Disposal }

1st step ÷ Carried forward of ROU Asset & lease liability at the date of modification

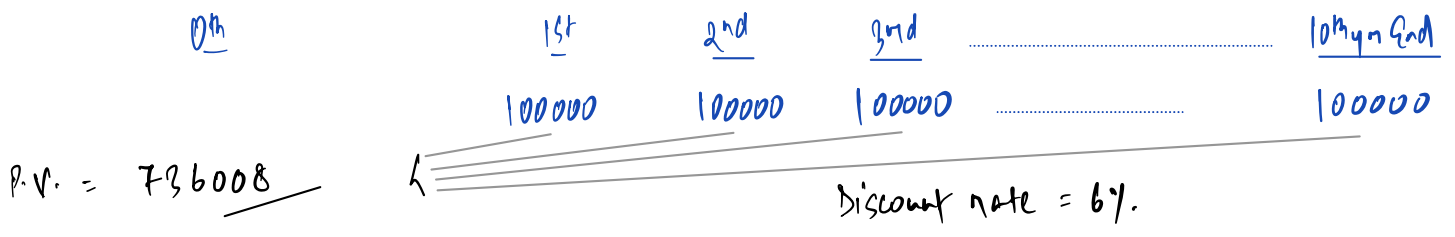
2nd step ÷ C.A. of ROU Asset & lease liab. is reduced proportionately and difference recognised in P/L.

3rd step ÷ Remeasure lease liability using revised lease rentals and revised discount rates.

4th step Any increase/decrease in lease liability is adjusted with ROU Asset

Illustration 34 - Modification that increases the scope of the lease by extending the contractual lease term

Lessee enters into a 10-year lease for 5,000 square metres of office space. The annual lease payments are ₹ 1,00,000 payable at the end of each year. The interest rate implicit in the lease cannot be readily determined. Lessee's incremental borrowing rate at the commencement date is 6% p.a. **At the beginning of Year 7, Lessee and Lessor agree to amend** the original lease by extending the contractual lease term by four years. The annual lease payments are unchanged (i.e., ₹ 1,00,000 payable at the end of each year from Year 7 to Year 14). Lessee's incremental borrowing rate at the beginning of Year 7 is 7% p.a. How should the said modification be accounted for?



ROU Asset 736008
 To lease liability 736008

Lease liability

Year	Initial Value	Interest	Payment	Closing Value
1	736008	44160	(100000)	680168
2	680168	40810	(100000)	620978
3	620978	37259	(100000)	558237
4	558237	33444	(100000)	491731
5	491731	29504	(100000)	421235
6	421235	25274	(100000)	346509
7	346509			

ROU Asset

Initial Value	Dep ⁿ (6yrs)	Closing Value (7 th year Begs.)
736008	(441604)	294404

Modification at 7th yr Beginning

6th yr End 😊	7th	8th	9th	10th	11th	12th	13th	14th
	100000	100000	100000	100000	100000	100000	100000	100000

597130 \leftarrow Revised Discount rate = 7%

Increase in lease liability $\langle 597130 - 346509 \rangle = 250621$

↳ ROU Asset 250621

To lease liability 250621

	B/sheet	
lease liability $\langle 346509 + 250621 \rangle$	597130	ROU Asset 545025
(+) Interest Exp @ 7%	41799	$\langle 294404 + 250621 \rangle$
(-) Payment	<u>(100000)</u>	Dep ⁿ every year = $\frac{545025}{8.475} =$
lease liability at 1st yr End	<u>538929</u>	

Continued till 8.475

Illustration 35 - Modification that decreases the scope of the lease 🐼🐼 Decrease in Scope.

Lessee enters into a 10-year lease for 5,000 square metres of office space. The annual lease payments are ₹ 50,000 payable at the end of each year. The interest rate implicit in the lease cannot be readily determined. Lessee's incremental borrowing rate at the commencement date is

6% p.a. At the beginning of Year 6, Lessee and Lessor agree to amend the original lease to reduce the space to only 2,500 square metres of the original space starting from the end of the first quarter of Year 6. The annual fixed lease payments (from Year 6 to Year 10) are ₹ 30,000. Lessee's incremental borrowing rate at the beginning of Year 6 is 5% p.a.

How should the said modification be accounted for?

	0th	1st	2nd	3rd	10th yr End
		50000	50000	50000	50000

P.V. = 368004 \leftarrow Discount rate = 6%

ROU Asset 368004

To lease liability 368004

5th yr End



<u>0th</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>10th</u>
30000	30000	30000	30000	30000	30000

129884

5%

∴ Increase in lease liability $\{ 129884 - 105308 \} = 24576$

ROU Asset 24576

To lease liability 24576

manobhat 3-4 times practice.

Illustration 37 - Modification that both increases and decreases the scope of the lease

Lessee enters into a 10-year lease for 2,000 square metres of office space. The annual lease payments are ₹ 1,00,000 payable at the end of each year. The interest rate implicit in the lease cannot be readily determined. Lessee's incremental borrowing rate at the commencement date is 6% p.a.

At the beginning of Year 6, Lessee and Lessor agree to amend the original lease to:

- a) include an additional 1,500 square metres of space in the same building starting from the beginning of Year 6 and
- b) reduce the lease term from 10 years to eight years. The annual fixed payment for the 3,500 square metres is ₹ 1,50,000 payable at the end of each year (from Year 6 to Year 8). Lessee's incremental borrowing rate at the beginning of Year 6 is 7% p.a.

The consideration for the increase in scope of 1,500 square metres of space is not commensurate with the stand-alone price for that increase adjusted to reflect the circumstances of the contract. Consequently, Lessee does not account for the increase in scope that adds the right to use an additional 1,500 square metres of space as a separate lease.

How should the said modification be accounted for?

0th

1st

2nd

3rd

10th yr End

100000	100000	100000	100000
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P.V. = 736008

Discount rate = 6%

ROU Asset 736008

To lease liability 736008 → ICAI taken 735900 using 3 decimals.

Lease Liability

<u>Year</u>	<u>Initial Value</u>	<u>Interest</u>	<u>Payment</u>	<u>Closing Value</u>
1	736008	44160	(100000)	680168
2	680168	40810	(100000)	620978
3	620978	37259	(100000)	558237
4	558237	33444	(100000)	491731
5	491731	29504	(100000)	421235
6	421235			

ROU Asset

<u>Initial Value</u>	<u>Depⁿ (5 years)</u>	<u>Closing Value (6th year Begg.)</u>
736008	(368004)	368004

x 40%
147201

Step 2 = Calc of selling profit on loss

<u>5th year</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
	100000	100000	100000	100000	100000

P.V. = 267301 < 6%

$$\therefore \text{Decrease in lease liability } (421235 - 267301) = 153934$$

$$\text{" " ROU Asset } (368004 \times \frac{2}{5}) = 147201$$

$$\therefore \text{Selling Profit} = 6733$$

Journal

Lease Liability Dr. 153934
 To ROU Asset 147201
 To Gain on Sale 6733

CA of lease liab = 267301

CA of ROU Asset = 220103