Question 9.7 Depreciation calculation

On 1 July 2016, Salt Airlines Ltd acquired a new aeroplane for a total cost of $10 million. A breakdown of the costs to build the aeroplane was given by the manufacturers as follows:

Aircraft body	**$**	**3 000 000**
Engines (2)		**4 000 000**
Fitting out of aircraft:		
Seats		**1 000 000**
Carpets		**50 000**
Electrical equipment — passenger seats		**200 000**
— cockpit		**1 500 000**
Food preparation equipment		**250 000**

All costs include installation and labour costs associated with the relevant part.

It is expected that the aircraft will be kept for 10 years and then sold. The main value of the aircraft at that stage is the body and the engines. The expected selling price is $2.1 million, with the body and engines retaining proportionate value.

Costs in relation to the aircraft over the next 10 years are expected to be as follows:

- ***Aircraft body.*** **This requires an inspection every 2 years for cracks and wear and tear, at a cost of $10 000.**
- ***Engines*****. Each engine has an expected life of 4 years before being sold for scrap. It is expected that the engines will be replaced in 2020 for $4.5 million and again in 2024 for $6 million. These engines are expected to incur annual maintenance costs of $300 000. The manufacturer has informed Salt Airlines Ltd that a new prototype engine with an extra 10% capacity should be on the market in 2022, and that existing engines could be upgraded at a cost of $1 million.**
- ***Fittings*****. Seats are replaced every 3 years. Expected replacement costs are $1.2 million in 2019 and $1.5 million in 2025. The repair of torn seats and faulty mechanisms is expected to cost $100 000 p.a. Carpets are replaced every 5 years. They will be replaced in 2021 at an expected cost of $65 000, but will not be replaced again before the aircraft is sold in 2026. Cleaning costs amount to $10 000 p.a. The electrical equipment (such as the TV) for each seat has an annual repair cost of $15 000. It is expected that, with the improvements in technology, the equipment will be totally replaced in 2022 by substantially better equipment at a cost of $350 000. The electrical equipment in the cockpit is tested frequently at an expected annual cost of $250 000. Major upgrades to the equipment are expected every 2 years at expected costs of $250 000 (in 2015), $300 000 (in 2017), $345 000 (in 2019) and $410 000 (in 2024). The upgrades will take into effect the expected changes in technology.**
- ***Food preparation equipment.*** **This incurs annual costs for repair and maintenance of $20 000. The equipment is expected to be totally replaced in 2022.**

Required

A. Discuss how the costs relating to the aircraft should be accounted for.

B. Determine the expenses recognised for the 2016–17 financial year.

A.

Discuss:
- the advantages of a components approach versus a simple depreciation of the $10 million dollars over the 10-year period.
- the treatment of the upgrades of cockpit equipment
- accounting for inspections

B: Expenses for the 2016-17 year:

Aircraft body:

Annual expense of $5 000 ($10 000 / 2years) for inspection for cracks
Depreciation expense = 1/10 (3 000 000 – 3/7 x $2 100 000) = $210 000

It is explained that the main value of the aircraft is the body ($3m) and engines ($4m), a total of $7m. These two components are expected to retain their proportionate values for when the aircraft is sold in 10 years' time for $2.1m Therefore, the depreciable amount for the aircraft body is adjusted by its proportionate residual value. That is, $3m/$7m x $2.1m selling price.

Engines:

Depreciation expense = 4 000 000/4 = $1 000 000
Maintenance expense = $300 000

The depreciation calculation does not take into account the proportionate value of the engines compared to the aircraft body. Why? The aircraft body is kept until it is expected to be sold in 10 years' time, whereas the engines are replaced every 4 years.

Fittings

Seats: Depreciation = 1/3 x $1 000 000 = $333 333
Annual expense = $100 000

Carpets: Depreciation = 1/5 x 50 000 = $10 000
Cleaning = $10 000

Electrical: Passenger
Annual expense = $15 000
Depreciation = 1/6 x $200 000 = $33 333
(expected to be replaced in 2020 – 6 years from date of purchase)

Electrical: Cockpit
Annual expense = $250 000
Depreciation = 1/10 x $1 500 000 = $150 000

Food preparation equipment:

Annual expense = $20 000

Depreciation = 250 000/6 = $41 667

Total other expenses = $ 700 000
Annual depreciation = $1 778 333

Question 9.11 Revaluation of assets

On 1 July 2016, Kingdom Ltd acquired two assets within the same class of plant and equipment. Information on these assets is as follows:

	Cost	Expected useful life
Machine A	**$100 000**	**5 years**
Machine B	**60 000**	**3 years**

The machines are expected to generate benefits evenly over their useful lives. The class of plant and equipment is measured using fair value.

At 30 June 2017, information about the assets is as follows:

	Fair value	Expected useful life
Machine A	**$84 000**	**4 years**
Machine B	**38 000**	**2 years**

On 1 January 2018, Machine B was sold for $29 000 cash. On the same day, Kingdom Ltd acquired Machine C for $80 000 cash. Machine C has an expected useful life of 4 years. Kingdom Ltd also made a bonus issue of 10 000 shares at $1 per share, using $8000 from the general reserve and $2000 from the asset revaluation surplus created as a result of measuring Machine A at fair value.

At 30 June 2018, information on the machines is as follows:

	Fair value	Expected useful life
Machine A	**$61 000**	**3 years**
Machine C	**68 500**	**1.5 years**

The income tax rate is 30%.

Required

Prepare the journal entries in the records of Kingdom Ltd to record the described events over the period 1 July 2016 to 30 June 2018, assuming the ends of the reporting periods are 30 June 2017 and 30 June 2018.

1 July 2016

Machine A	Dr	100 000	
Machine B	Dr	60 000	
Cash	Cr		160 000

30 June 2017

Depreciation expense – Machine A	Dr	20 000	
Accumulated depreciation	Cr		20 000
(1/5 x $100 000)			
Depreciation expense – Machine B	Dr	20 000	
Accumulated depreciation	Cr		20 000
(1/3 x $60 000)			
Accumulated depreciation- Machine A	Dr	20 000	
Machine A	Cr		20 000
(Writing down to carrying amount)			
Machine A	Dr	4 000	
Gain on revaluation of Machine A (OCI)	Cr		4 000
(Revaluation increment: $80 000 to $84 000)			
Income tax expense (OCI)	Dr	1 200	
Deferred tax liability	Cr		1 200
(Tax effect of revaluation increment)			
Gain on revaluation of Machine A (OCI)	Dr	4 000	
Income tax expense (OCI)	Cr		1 200
Asset revaluation surplus – Machine A	Cr		2 800
(Accumulation of net revaluation gain in equity))			
Accumulated depreciation – Machine B	Dr	20 000	
Machine B	Cr		20 000
(Writing down to carrying amount)			
Expense – revaluation decrement (P&L)	Dr	2 000	
Machine B	Cr		2 000
(Revaluation to fair value at 30/6/17)			

1 January 2018

Machine C	Dr	80 000	
Cash	Cr		80 000
(Acquisition of machine C)			
Depreciation expense – Machine B	Dr	9 500	
Accumulated depreciation	Cr		9 500
(($38 000 / 2years) x 1/2 year depn)			
Cash	Dr	29 000	
Proceeds on sale of Machine B	Cr		29 000
(Sale of Machine B)			
Carrying amount of Machine B Sold	Dr	28 500	

Accumulated depreciation	Dr	9 500	
Machine B	Cr		38 000
(Carrying amount of machine sold)			
General reserve	Dr	8 000	
Asset revaluation surplus – Machine A	Dr	2 000	
Share Capital	Cr		10 000

30 June 2018

Depreciation expense – Machine A	Dr	21 000	
Accumulated depreciation	Cr		21 000
(1/4 x $84 000)			
Depreciation expense – Machine C	Dr	10 000	
Accumulated depreciation	Cr		10 000
(1/4 x ½ x $80 000)			
Accumulated depreciation – Machine A	Dr	21 000	
Machine A	Cr		21 000
(Writing down to carrying amount)			
Loss on revaluation of Machine A (OCI)	Dr	2 000	
Machine A	Cr		2 000
(Write down of plant from $63000 to $61000)			
Deferred tax liability	Dr	600	
Income tax expense (OCI)	Cr		600
(Tax-effect on downward revaluation subsequent to upward revaluation)			
*Asset revaluation surplus – Machine A	Dr	800	
Income tax expense (OCI)	Dr	600	
Loss on revaluation of Machine A(P&L)	Dr	600	
Loss on revaluation of Machine A (OCI)	Cr		2 000
(Accumulation of revaluation loss to equity)			

*Note: in the previous year the value of the ARS account from a revaluation increment for Machine A was $2 800. However, the entity used $2 000 of this surplus for a bonus share issue, leaving $800 balance in this account. Therefore, when recognising a revaluation decrement for Machine A the ARS account can only be reduced by the $800 remaining. The balance of the loss on revaluation must now be recognised directly in P&L.

Accumulated depreciation – Machine C	Dr	10 000	
Machine C	Cr		10 000
(Writing down to carrying amount)			
Loss on revaluation (P&L)	Dr	1 500	
Machine C	Cr		1 500
(Revaluation to fair value at 30/6/18)			

Question 9.17 Acquisition, disposal and depreciation of assets

Robot Manufacturing Ltd's post-closing trial balance at 30 June 2016 included the following balances:

Machinery Control (at cost)	**$244 480**
Accumulated Depreciation – Machinery Control	**113 800**
Fixtures (at cost)	**308 600**
Accumulated Depreciation – Fixtures	**134 138**

The Machinery Control and Accumulated Depreciation – Machinery Control accounts are supported by subsidiary ledgers. Details of machines owned at 30 June 2016 are as follows:

Machine	Purchase date	Cost	Estimated useful Life	Estimated residual value
1	28 Apr 2012	$74 600	5 years	$3 800
2	04 Feb 2014	$82 400	5 years	$4 400
3	26 Mar 2015	$87 480	6 years	$5 400

Additional information

- **Robot Manufacturing Ltd uses the general journal for all journal entries, records depreciation to the nearest month, balances its accounts 6-monthly, and records amounts to the nearest dollar.**
- **Robot Manufacturing Ltd uses straight-line depreciation for machinery and diminishing balance depreciation at 20% p.a. for fixtures.**

The following transactions and events occurred from 1 July 2016 onwards:

2016

03 July **Exchanged items of fixtures (cost: $100 600; carrying amount at exchange date: $56 872; fair value at exchange date: $57 140) for a used machine (Machine 4). Machine 4's fair value at exchange date was $58 000. Machine 4 originally cost $92 660 and had been depreciated by $31 790 to exchange date in the previous owner's accounts. Robot Manufacturing Ltd estimated Machine 4's useful life and residual value at 3 years and $4580.**

10 Oct **Traded in Machine 2 for a new machine (Machine 5), that cost $90 740. A trade-in allowance of $40 200 was received and the balance was paid in cash. Freight charges of $280 and installation costs of $1600 were also paid in cash. Robot Manufacturing Ltd estimated Machine 5's useful life and residual value at 6 years and $5500.**

2017

24 Apr **Overhauled Machine 3 at a cash cost of $16 910, after which Robot Manufacturing Ltd revised its residual value to $5600 and extended its estimated useful life by 2 years.**

16 May **Paid for scheduled repairs and maintenance on the machines of $2 370.**

30 June **Recorded depreciation and scrapped Machine 1.**

Required

A. Prepare journal entries to record the above transactions and events. (Narrations are not required.)

B. Prepare the Accumulated Depreciation Control – Machinery and Accumulated Depreciation – Fixtures ledger accounts for the period 1 July 2016 to 30 June 2017.

1. JOURNAL ENTRIES

- *M1 depreciation = [74 600 – 3 800]/60 = 1 180 per month*
- *M2 depreciation = [82 400 – 4 400]/60 = 1 300 per month*
- *M3 depreciation = [87 480 – 5 400]/72 = 1 140 per month*

03/07/16	Accumulated depreciation – fixtures			
	(100 600 – 56 872)	Dr	43 728	
	Carrying amount of asset sold – fixtures	Dr	56 872	
	Fixtures	Cr		100 600
	(De-recognition of asset sold)			
	Machinery (M4)	Dr	57 140	
	Proceeds on sale of asset – fixtures	Cr		57 140
	(Sale of asset and recognition of asset acquired)			
	M4 depreciation = [57 140 – 4 580]/36 = 1 460 per month			
10/10/16	Depreciation – machinery (M2)	Dr	3 900	
	Accumulated depreciation – machinery (M2)	Cr		3 900
	(Depreciation of M2 up to date of trade-in:			
	3 months x 1300)			
	Accumulated depreciation – Machinery (M2)			
	(1 300 x 32 months)	Dr	41 600	
	Carrying amount of machinery sold (M2)			
	(82 400 – 41 600)	Dr	40 800	
	Machinery (M2)	Cr		82 400
	(De-recognition of asset sold)			
	Machinery (M5)	Dr	92 620	
	Proceeds on sale of machinery – (M2)	Cr		40 200
	Cash	Cr		52 420
	(Acquisition of new machinery (M5):			
	90 740 + 280 + 1600)			
	M5 depreciation = [92 620 – 5 500]/72 = 1 210 per month			
24/04/17	Depreciation – Machinery (M3)	Dr	11 400	
	Accumulated depreciation – Machinery (M3)	Cr		11 400
	(Depreciation on M3 up to point of overhaul:			
	1 140 x 10 months)			
	Accumulated Depreciation - machinery (M3)	Dr	28 500	
	Machinery (M3)	Cr		28 500
	(write down to carrying amount prior to overhaul)			
	[$1 140 x 25 months]			

	Machinery (M3)	Dr	16 910	
	Cash	Cr		16 910
	(Cost of overhaul)			

M3: new depreciable amount = 87 480 – (1 140 x 25mths) + 16 910 – 5,600
= 70 290
new useful life = 72–25+24
= 71 months
revised depreciation = 70 290/71
= 990 per month

16/05/17	Repairs and maintenance expense	Dr	2 370	
	Cash	Cr		2 370
	(Repairs and maintenance expense)			
30/06/17	Depreciation expense– machinery	Dr	42 190	
	Accumulated depreciation – machinery	Cr		42 190
	(Depreciation charge up to end of year:			
	M1: 1 180 x 10 months = 11 800			
	M3: 990 x 2 months = 1 980			
	M4: 1 460 x 12 months = 17 520			
	M5: 1 210 x 9 months = 10 890)			
	Depreciation – fixtures	Dr	23 518	
	Accumulated depreciation – fixtures	Cr		23 518
	(Depreciation charge up to year end:			
	Cost: 308 600 – 100 600 = 208,000)			
	Accumulated depreciation = 134 138 – 43 728			
	= 90 410			
	Depreciable amount = 117,590			
	Depreciation charge = 117 590 x 20%			
	= 23 518)			
	Accumulated depreciation – machinery (M1)			
	(1 180 x 60 months)	Dr	70 800	
	Carrying amount of machinery scrapped (M1)			
	(74 600 – 70 800)	Dr	3 800	
	Machinery (M1)	Cr		74 600
	(De-recognition of machinery scrapped – M1)			

2. LEDGER ACCOUNTS

ACCUMULATED DEPRECIATION CONTROL - MACHINERY

10/10/16	Machinery (M2)	41 600	30/06/16	Balance b/d	113 800
31/12/16	Balance c/d	76 100	10/10/16	Depreciation (M2)	3 900
		117 700			117 700
24/04/17	Machinery (M3)	28 500	31/12/16	Balance b/d	76 100
30/06/17	Machinery (M1)	70 800	24/04/17	Depreciation (M3)	11 400
	Balance c/d	30 390	30/06/17	Depreciation	42 190
		129 690			129 690

ACCUMULATED DEPRECIATION - FIXTURES

03/07/016	Fixtures	43 728	30/06/16	Balance b/d	134 138
31/12/16	Balance c/d	90 410			
		134 138			134 138
			31/12/16	Balance b/d	90 410
30/06/17	Fixtures	113 928	30/06/17	Depreciation	23 518
		113 928			113 928

Question 10.6 Accounting for a finance lease by the lessor

On 1 July 2015, Jane Plum went to the local car yard, North Ltd, and agreed to lease a new Ford Mustang based on an agreed price of $37 000. South Ltd, a local finance company, set up the lease agreement. North Ltd had acquired the car from the manufacturer for $30 000 and transferred the car to South Ltd for $37 000.

South Ltd — the lessor — wrote a lease agreement, incurring initial direct costs of $1410 as a result. The lease agreement contained the following provisions:

Initial payment on 1 July 2015	**$13 000**
Payments on 1 July 2016 and 1 July 2017	**$13 000**
Guaranteed residual value at 30 June 2018	**$10 000**
Implicit interest rate in the lease	**6%**
The lease is non-cancellable.	

South Ltd agreed to pay for the insurance and maintenance of the vehicle, the latter to be carried out by North Ltd at regular intervals. The required lease payments included the costs for these services at $3000 p.a.

The vehicle had an expected useful life of 4 years. The expected residual value of the vehicle at 30 June 2018 was $12 000.

Costs of maintenance and insurance incurred by South Ltd over the years ended 30 June 2016 to 30 June 2018 were $2810, $3020 and $2750 respectively. On 30 June 2018,

Jane returned the vehicle to South Ltd. On 5 July 2018, South Ltd sold the car to a third party for $9000 and Jane agreed to pay the balance of the guaranteed residual. The lease is classified as a finance lease by South Ltd.

Required

A. Calculate the net investment in the lease for South Ltd

B. Prepare a lease receipts schedule for South Ltd.

C. Prepare the journal entries of South Ltd in relation to the lease from 1 July 2015 to 5 July 2018.

D. In relation to finance leases, explain why the balance of the lease receivable asset raised by the lessor at the inception of the lease may differ from the balance of the lease liability raised by the lessee.

SOUTH LTD (LESSOR)

South Ltd is a financier lessor rather than a manufacturer/dealer lessor. The significance of this classification is that:

- there is no selling profit to South Ltd on entering into the lease arrangement
- initial indirect costs are included the initial recognition of the lease receivable

PART A

The annual lease receipts that relate to the use of the asset amount to $10 000, that is, the full amount of $13 000 less reimbursement for executory costs $3 000. The guaranteed residual at the end of the lease is $10 000 and the unguaranteed is $2 000 giving a total of $12 000 at the end of the lease.

The lease receivable is initially measured at $38 410 calculated as follows:

(1) Fair Value + Initial Direct Costs = $37 000 + $1 410

(2) Net investment in lease = PV of MLP + PV of Unguaranteed Residual Value (UGRV)

PV of MLP = 10 000 + 10 000 x 1.8334 [T2 6% 2 yrs] + 10 000 x 0.8396 [T1 6% 3 yrs]
= 10 000 + 18 334+ 8 396
=36 730

PV of UGRV = 2 000 x 0.8396 [T1 6% 3 yrs]
= 1 679

Net investment in lease = 36 730 + 1 679 = $38 409 (difference due to rounding)

PART B – LEASE RECEIPTS SCHEDULE

South Ltd (lessor)
Schedule of lease receipts

	MLR	Interest revenue	Receivable reduction	Receivable balance
	$	**$**	**$**	**$**
1 July 2015				38 410
1 July 2015	10 000	-	10 000	28 410
1 July 2016	10 000	1 705	8 295	20 115
1 July 2017	10 000	1 207	8 793	11 322
30 June 2018	12 000	678*	11 322	--
	42 000	3 590	38 410	

*Includes adjustment for the effect of rounding

PART C – JOURNAL ENTRIES

South Ltd (lessor)
Journal entries

1 July 2015

Vehicle	Dr	37 000	
Cash	Cr		37 000
(Purchase of vehicle by lessor)			
Lease Receivable	Dr	38 410	
Cash	Cr		1 410
Vehicle	Cr		37 000
(Lease of vehicle and payment of initial direct costs)			
Cash	Dr	13 000	
Unearned Revenue	Cr		3 000
Lease Receivable	Cr		10 000
(First lease receipt in advance)			

30 June 2016

Unearned Revenue	Dr	3 000	
Reimbursement Revenue	Cr		3 000
(Adjusting entry for unearned revenue)			
Insurance and Maintenance Expense	Dr	2 810	
Cash	Cr		2 810
(Executory costs incurred for the year)			

Interest Receivable	Dr	1 705	
Interest Revenue	Cr		1 705
(Accrual of interest for the year)			

1 July 2016

Cash	Dr	13 000	
Unearned Revenue	Cr		3 000
Interest Receivable	Cr		1 705
Lease Receivable	Cr		8 295
(Second lease receipt in advance)			

30 June 2017

Unearned Revenue	Dr	3 000	
Reimbursement Revenue	Cr		3 000
(Adjusting entry for unearned revenue)			
Insurance and Maintenance Expense	Dr	3 020	
Cash	Cr		3 020
(Executory costs incurred for the year)			
Interest Receivable	Dr	1 207	
Interest Revenue	Cr		1 207
(Accrual of interest for the year)			

1 July 2017

Cash	Dr	13 000	
Reimbursement Revenue	Cr		3 000
Interest Receivable	Cr		1 207
Lease Receivable	Cr		8 793
(Third lease receipt in advance)			

30 June 2018

Unearned Revenue	Dr	3 000	
Reimbursement Revenue	Cr		3 000
(Adjusting entry for unearned revenue)			
Insurance and Maintenance Expense	Dr	2 750	
Cash	Cr		2 750
(Executory costs incurred for the year)			
Vehicle	Dr	12 000	
Interest Revenue	Cr		678
Lease Receivable	Cr		11 322
(Return of vehicle at end of lease)			

5 July 2018

Cash	Dr	9 000	
Accounts Receivable/J Plum	Dr	1 000	
Proceeds on Sale of Vehicle	Cr		10 000
(Revenue from sale of vehicle)			
Carrying Amount of Vehicle Sold	Dr	12 000	
Vehicle	Cr		12 000
(Expense from sale of vehicle)			

PART D – FINANCE LEASE RECEIVABLE V FINANCE LEASE LIABILITY

Two situations in which the lease receivable recorded by lessor is not the same as lease asset recorded by lessee are:

1. There is an **unguaranteed residual value**. The lessor records as a lease receivable its net investment in the lease (present value of the minimum lease payments receivable and the present value of any unguaranteed residual value). The lessee, however, records as a leased asset (and lease liability) the present value of the minimum lease payments. The amount recorded by the lessee does not include any unguaranteed residual value.

and/or

2. If the lessor or lessee has incurred **initial direct costs**. If lessor (other than a manufacturer/dealer lessor) has incurred initial direct costs then its lease receivable balance is equal to the fair value of the asset plus costs. If the lessee has incurred initial direct costs they are added to the value of the leased asset.

Question 10.7 Accounting for a finance lease by the lessee and lessor

On 1 July 2015, Lions Den Ltd leased a plastic-moulding machine from Jersey City Ltd. The machine cost Jersey City Ltd $130 000 to manufacture and had a fair value of $154 109 on 1 July 2015. The lease agreement contained the following provisions:

Lease term	**4 years**
Annual rental payment, in advance on 1 July each year	**$41 500**
Residual value at end of the lease term	**$15 000**
Residual guaranteed by lessee	**nil**
Interest rate implicit in lease	**8%**
The lease is cancellable only with the permission of the lessor.	

The expected useful life of the machine is 6 years. Lions Den Ltd intends to return the machine to the lessor at the end of the lease term. Included in the annual rental payment is an amount of $1500 to cover the costs of maintenance and insurance paid for by the lessor.

Required

A. Explain why the lease should be classified as a finance lease by both lessee and lessor based on the guidance provided in AASB 117.

B. Prepare (1) the lease payment schedule for the lessee (show all workings); and (2) the journal entries in the accounting records of the lessee for all years of the lease.

C. Prepare (1) the lease receipt schedule for the lessor (show all workings); and (2) the journal entries in the accounting records of the lessor for all years of the lease.

PART A – CLASSIFICATION OF LEASE

The lease would be classified by both lessee and lessor as a finance lease as substantially all of the risks and rewards incidental with ownership have been transferred as a result of the lease arrangement.

This is evidenced by the fact that:

- the lease is non-cancellable (by definition),
- the lease term, at 67%, could be argued to represent a major part of the economic life of the machine, and
- the present value of the minimum lease payments is substantially all of the fair value of the machine at the inception of the lease:

PV of MLP = 40 000 + 40 000 x 2.5771 [T2 8% 3 yrs]
= 40 000 + 103 084
= 143 084/154 109
= 93%

The lease payments for the use of the asset are $40 000 per annum, that is, $41 500 total less $1 500 for reimbursement of executory costs.

PART B – ACCOUNTING BY LESSEE

(1) Lease payment schedule

Lions Den Ltd (Lessee)
Schedule of lease payments

	MLP	Interest expense	Liability reduction	Liability balance
	$	$	$	$
1 July 2015				143 084
1 July 2015	40 000	-	40 000	103 084
1 July 2016	40 000	8 247	31 753	71 331
1 July 2017	40 000	5 706	34 294	37 037
1 July 2018	40 000	2 963	37 037	-
	160 000	16 916	143 084	

(2). Journal entries

Lions Den Ltd (Lessee)

1 July 2015

Leased Machine	Dr	143 084	
Lease Liability	Cr		143 084
(Inception of lease)			
Lease Liability	Dr	40 000	
Prepaid Ins & Maintenance	Dr	1 500	
Cash	Cr		41 500
(First lease payment in advance)			

30 June 2016

Ins & Maintenance Expense	Dr	1 500	
Prepaid Ins & Maintenance	Cr		1 500
(Adjusting entry for prepayment)			
Interest Expense	Dr	8 247	
Interest Payable	Cr		8 247
(Interest accrued at year end)			
Depreciation Expense	Dr	35 771	
Accumulated Depreciation	Cr		35 771
(Depreciation for year 1, $143 084 ÷ 4)			

1 July 2016

Lease Liability	Dr	31 753	
Interest Payable	Dr	8 247	
Prepaid Ins & Maintenance	Dr	1 500	
Cash	Cr		41 500
(Second lease payment in advance)			

30 June 2017

Ins & Maintenance Expense	Dr	1 500	
Prepaid Ins & Maintenance	Cr		1 500
(Adjusting entry for prepayment)			
Interest Expense	Dr	5 706	
Interest Payable	Cr		5 706
(Interest accrued at year end)			
Depreciation Expense	Dr	35 771	
Accumulated Depreciation	Cr		35 771
(Depreciation for year 2, $143 084 ÷ 4)			

1 July 2017

Lease Liability	Dr	34 294	
Interest Payable	Dr	5 706	
Prepaid Ins & Maintenance	Dr	1 500	
Cash	Cr		41 500
(Third lease payment in advance)			

30 June 2018

Ins & Maintenance Expense	Dr	1 500	
Prepaid Ins & Maintenance	Cr		1 500
(Adjusting entry for prepayment)			
Interest Expense	Dr	2 963	
Interest Payable	Cr		2 963
(Interest accrued at year end)			
Depreciation Expense	Dr	35 771	
Accumulated Depreciation	Cr		35 771
(Depreciation for year 3, $143 084 ÷ 4)			

1 July 2018

Lease Liability	Dr	37 037	
Interest Payable	Dr	2 963	
Prepaid Ins & Maintenance	Dr	1 500	
Cash	Cr		41 500
(Fourth lease payment in advance)			

30 June 2019

Ins & Maintenance Expense	Dr	1 500	
Prepaid Ins & Maintenance	Cr		1 500
(Adjusting entry for prepayment)			
Depreciation Expense	Dr	35 771	
Accumulated Depreciation	Cr		35 771
(Depreciation for year 4, $143 084 ÷ 4)			
Accumulated Depreciation	Dr	143 084	
Leased Machine	Cr		143 084
(De-recognition of lease asset)			

PART C – ACCOUNTING BY LESSOR

Jersey City Ltd is a manufacturer/dealer lessor. The significance of this classification is that:

- there is a selling profit to Jersey City Ltd on entering into the lease arrangement
- initial indirect costs are not included the initial recognition of the lease receivable but treated as part of the sale transaction

The lease receivable is initially measured at the fair value of $154 109 calculated as follows:

Net investment in lease = PV of MLP + PV of Unguaranteed Residual Value (UGRV)

PV of MLP = 40 000 + 40 000 x 2.5771 [T2 8% 3 yrs]
= 40 000 + 103 084
=143 084

PV of UGRV = 15 000 x 0.7350 [T1 8% 4 yrs]
= 11 025

Net investment in lease = 143 084 + 11 025 = $154 109

(1) Lease receipts schedule

Jersey City Ltd (Lessor)
Lease receipts schedule

	MLR	**Interest revenue**	**Receivable reduction**	**Receivable balance**
	$	**$**	**$**	**$**
1 July 2015				154 109
1 July 2015	40 000	-	40 000	114 109
1 July 2016	40 000	9 129	30 871	83 238
1 July 2017	40 000	6 659	33 341	49 897
1 July 2018	40 000	3 992	36 008	13 889
30 June 2019	15 000	1 111	13 889	-
	175 000	20 891	154 109	

(1) Journal Entries

Jersey City Ltd (Lessor)

1 July 2015

Lease Receivable	Dr	154 109	
Inventory	Cr		130 000
Cost of Sales	Dr	*118 975	
Sales Revenue	Cr		**143 084

(Inception of lease)
(* Cost less PV of UGRV [15 000 x 0.735])
(** PV of MLP)

Cash	Dr	41 500	
Unearned Revenue	Cr		1 500
Lease receivable	Cr		40 000
(First lease receipt in advance)			

30 June 2016

Unearned Revenue	Dr	1 500	
Reimbursement Revenue	Cr		1 500
(Adjusting entry for unearned revenue)			
Interest Receivable	Dr	9 129	
Interest Revenue	Cr		9 129
(Interest revenue accrued at year end)			

1 July 2016

Cash	Dr	41 500	
Interest Receivable	Cr		9 129
Unearned Revenue	Cr		1 500
Lease receivable	Cr		30 871
(Second lease receipt in advance)			

30 June 2017

Unearned Revenue	Dr	1 500	
Reimbursement Revenue	Cr		1 500
(Adjusting entry for unearned revenue)			
Interest Receivable	Dr	6 659	
Interest Revenue	Cr		6 659
(Interest revenue accrued at year end)			

1 July 2017

Cash	Dr	41 500	
Interest Receivable	Cr		6 659
Unearned Revenue	Cr		1 500
Lease receivable	Cr		33 341
(Third lease receipt in advance)			

30 June 2018

Unearned Revenue	Dr	1 500	
Reimbursement Revenue	Cr		1 500
(Adjusting entry for unearned revenue)			

Interest Receivable	Dr	3 992	
Interest Revenue	Cr		3 992
(Interest revenue accrued at year end)			

1 July 2018

Cash	Dr	41 500	
Interest Receivable	Cr		3 992
Unearned Revenue	Cr		1 500
Lease receivable	Cr		36 008
(Fourth lease receipt in advance)			

30 June 2019

Unearned Revenue	Dr	1 500	
Reimbursement Revenue	Cr		1 500
(Adjusting entry for unearned revenue)			

Inventory	Dr	15 000	
Interest Revenue	Cr		1 111
Lease Receivable	Cr		13 889
(Return of equipment at lease end)			

The lessor would also record insurance and maintenance expenses during the lease term for the insurance and maintenance costs it incurs in relation to the plastic moulding machine.

Question 10.8 Accounting for a finance lease by the lessee and the lessor

On 1 July 2015, Standing Ltd leased a processing plant to Fell Ltd. The plant was purchased by Standing Ltd on 1 July 2015 for its fair value of $467 112. The lease agreement contained the following provisions:

Lease term	**3 years**
Economic life of plant	**5 years**
Annual rental payment, in arrears (commencing 30/6/2016)	**$150 000**
Residual value at end of the lease term	**$90 000**
Residual guaranteed by lessee	**$60 000**
Interest rate implicit in lease	**7%**
The lease is cancellable only with the permission of the lessor.	

Fell Ltd intends to return the processing plant to the lessor at the end of the lease term. The lease has been classified as a finance lease by both the lessee and the lessor.
Required

A. Prepare (1) the lease payment schedule for the lessee (show all workings); and (2) the journal entries in the records of the lessee for all years of the lease.

B. Prepare (1) the lease receipt schedule for the lessor (show all workings); and (2) the journal entries in the records of the lessor for all years of the lease.

PART A – ACCOUNTING BY THE LESSEE

FELL LTD

1. Lease payment schedule

Fell Ltd (Lessee)
Schedule of lease payments

	MLP	Interest expense	Liability reduction	Liability balance
	$	$	$	$
1 July 2015				*442 623
30 June 2016	150 000	30 984	119 016	323 607
30 June 2017	150 000	22 652	127 348	196 259
30 June 2018	150 000	13 741	136 259	60 000
30 June 2018	60 000	-	60 000	-
	510 000	67 377	442 623	

Workings

PV of MLP = $150 000 x 2.6243 [T2 7% 3y] + $60 000 x 0.8163 [T1 7% 3y]
= $393 645 + $48 978
= $442 623*

2. Journal entries

Fell Ltd (Lessee)

1 July 2015

Leased Processing Plant	Dr	442 623	
Lease Liability	Cr		442 623
(Initial recognition of finance lease)			

30 June 2016

Lease Liability	Dr	119 016	
Interest Expense	Dr	30 984	
Cash	Cr		150 000
(First lease payment in arrears)			
Depreciation Expense	Dr	127 541	
Accumulated Depreciation	Cr		127 541
(Depreciation for year 1)			
[(442 623 – 60 000)/3]			

30 June 2017

Lease Liability	Dr	127 348	
Interest Expense	Dr	22 652	
Cash	Cr		150 000
(Second lease payment in arrears)			
Depreciation Expense	Dr	127 541	
Accumulated Depreciation	Cr		127 541
(Depreciation for year 2)			
[(442 623 – 60 000)/3]			

30 June 2018

Lease Liability	Dr	136 259	
Interest Expense	Dr	13 741	
Cash	Cr		150 000
(Third lease payment in arrears)			
Depreciation Expense	Dr	127 541	
Accumulated Depreciation	Cr		127 541
(Depreciation for year 3)			
[(442 623 – 60 000)/3]			
Lease Liability	Dr	60 000	
Leased Processing Plant	Cr		60 000
(Return of plant to lessor)			
Accumulated Depreciation	Dr	382 623	
Leased Processing Plant	Cr		382 623
(De-recognition of leased asset)			

PART B – ACCOUNTING BY THE LESSOR

STANDING LTD

1. Lease receipts schedule

Standing Ltd (Lessor)
Lease receipts schedule

	MLR	**Interest revenue**	**Receivable reduction**	**Receivable balance**
	$	**$**	**$**	**$**
1 July 2015				467 112
30 June 2016	150 000	32 698	117 302	349 810
30 June 2017	150 000	24 487	125 513	224 297
30 June 2018	150 000	15 703	134 297	90 000
30 June 2018	90 000	-	90 000	-
	540 000	72 888	467 112	

Net investment in lease = P.V. of MLP + P.V of unguaranteed residual value (UGRV)
= $442 623 + 30 000 x 0.8163 [T1 7% 3y]
= $467 112

2. Journal entries

Christchurch Ltd (Lessor)
Journal entries

1 July 2015

Processing Plant	Dr	467 112	
Cash	Cr		467 112
(Acquisition of plant)			
Lease Receivable	Dr	467 112	
Plant	Cr		467 112
(Initial recognition of finance lease)			

30 June 2016

Cash	Dr	150 000	
Interest revenue	Cr		32 698
Lease receivable	Cr		117 302
(First lease receipt in arrears)			

30 June 2017

Cash	Dr	150 000	
Interest Revenue	Cr		24 487
Lease Receivable	Cr		125 513
(Second lease receipt in arrears)			

30 June 2018

Cash	Dr	150 000	
Interest Revenue	Cr		15 703
Lease Receivable	Cr		134 297
(Third lease receipt in arrears)			
Processing Plant	Dr	90 000	
Lease Receivable	Cr		90 000
(Return of plant at end of lease)			

Question 10.11 Accounting for a sale and leaseback transaction by the lessee and lessor

Squeal Ltd is asset rich but cash poor. In an attempt to alleviate its liquidity problems, it entered into an agreement on 1 July 2015 to sell its processing plant to Tyres Ltd for $467 100. At the date of sale, the plant had a carrying amount of $400 000 and a future useful life of 5 years. Tyres Ltd immediately leased the processing plant back to Squeal Ltd. The terms of the lease agreement were:

Lease term	**3 years**
Economic life of plant	**5 years**
Annual rental payment, in arrears (commencing 30/6/16)	**$165 000**
Residual value of plant at end of lease term	**$90 000**
Residual value guaranteed by Squeal Ltd	**$60 000**
Interest rate implicit in the lease	**6%**
The lease is cancellable, but only with the permission of the lessor.	

At the end of the lease term, the plant is to be returned to Tyres Ltd. In setting up the lease agreement Tyres Ltd incurred $9414 in legal fees and stamp duty costs. The annual rental payment includes $15 000 to reimburse the lessor for maintenance costs incurred on behalf of the lessee.

Required

A. Explain why the lease should be classified as a finance lease by both the lessor and lessee.

B. Prepare a lease payments schedule and the journal entries in the records of Squeal Ltd for the lease. Show all workings.

C. Prepare a lease receipts schedule and the journal entries in the records of Tyres Ltd for the lease. Show all workings.

D. Explain how and why your answers to requirements A and B would change if the lease agreement could be cancelled at any time without penalty.

E. Explain how and why your answer to requirements A, B and C would change if the processing plant had been manufactured by Tyres Ltd at a cost of $400 000.

SALE AND LEASEBACK TRANSACTION

Squeal Ltd (Seller)
Squeal Ltd (Lessee) and Tyres Ltd (Lessor)

If a sale and leaseback transaction results in a finance lease any excess of proceeds over the carrying amount shall not be immediately recognised as income by a seller-lessee. Instead, it shall be deferred and amortised over the lease term.

PART A - CLASSIFICATION OF THE LEASE

Both the lessor and the lessee must determine whether the lease agreement effectively transfers substantially all of the risks and rewards from the owner to the lessee.

In this case, based on the following evidence, both parties should conclude that such a transfer is achieved and the lease should be classified as a **finance lease**:

- the lease is non-cancellable (by definition)

- the lease term at 60% which, arguably, is for a major part of the asset's economic life, and

- the PV of the MLP at 96.6% represents substantially all of the asset's fair value (see calculation below)

PV of MLP

Minimum Lease Payments = ($165 000 – $15 000) x 3 [rentals net of executory costs] + $60 000 [GRV]

Interest Rate 6%

Pattern of Payments - Arrears

PV of MLP = $150 000 x 2.6730 [T2 6% 3 years]
+ $60 000 x 0.8396 [T1 6% 3 years]
= $400 950 + $50 376
= $451 326

PV/FV = $451 326/$467 100
= 96.6%

PART B – LEASE PAYMENTS SCHEDULE AND JOURNALS

1. Lease repayment schedule

Squeal Ltd (Lessee)
Lease Payments Schedule

Date	MLP	Interest Expense	Reduction of liability	Balance of lease liability
	$	$	$	$
1 July 2015				451 326
30 June 2016	150 000	27 080	122 920	328 406
30 June 2017	150 000	19 704	130 296	198 110
30 June 2018	150 000	11 890	138 110	60 000
30 June 2018	60 000	-	60 000	
	510 000	58 674	451 326	-

2. Accounting for the lease in the books of Squeal Ltd (lessee)

Journal Entries

1 July 2015

Cash	Dr	467 100	
Deferred gain on sale	Cr		67 100
Processing plant	Cr		400 000
(Sale of plant under sale and leaseback agreement)			

Leased plant	Dr	451 326	
Lease liability	Cr		451 326
(Recognition of lease agreement)			

30 June 2016

Lease liability	Dr	122 920	
Interest expense	Dr	27 080	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(First lease payment in arrears)			
Depreciation expense	Dr	130 442	
Accumulated depreciation	Cr		130 442
(Depreciation of leased asset *[($451 326 – 60 000)/3]*			
Deferred gain on sale	Dr	22 367	
Revenue on sale	Cr		22 367
(Amortisation of deferred gain - $67 100/3)			

30 June 2017

Lease liability	Dr	130 296	
Interest expense	Dr	19 704	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(Second lease payment in arrears)			
Depreciation expense	Dr	130 442	
Accumulated depreciation	Cr		130 442
(Depreciation of leased asset *[($451 326 – 60 000)/3]*			
Deferred gain on sale	Dr	22 367	
Revenue on sale	Cr		22 367
(Amortisation of deferred gain - $67 100/3)			

30 June 2018

Lease liability	Dr	138 110	
Interest expense	Dr	11 890	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(Third lease payment in arrears)			
Depreciation expense	Dr	130 442	
Accumulated depreciation	Cr		130 442
(Depreciation of leased asset *[($451 326 – 60 000)/3]*			

Deferred gain on sale	Dr	22 367	
Revenue on sale	Cr		22 367
(Amortisation of deferred gain - $67 100/3)			

Lease liability	Dr	60 000	
Leased plant	Cr		60 000
(Return of leased asset to lessor)			

Leased plant	Dr	391 326	
Accumulated depreciation	Cr		391 326
(De-recognition of leased asset)			

PART C – LEASE RECEIPTS SCHEDULE AND JOURNALS

Lessor is a financier lessor (i.e. non-maufacturer/non-dealer) therefore:

Net investment in the lease = fair value of leased asset + initial indirect costs
= 467 100 + 9 414 = $476 514

Net investment in the lease = PV of MLP + PV of UGRV
= 451 326 + 30 000 x 0.8396 [T1 6% 3 years]
= $476 514

1. Lease receipts schedule

Tyres Ltd (Lessor)
Lease Receipts Schedule

Date	MLR	Interest Revenue	Reduction in Receivable	Balance of lease Receivable
	$	$	$	$
1 July 2015				476 514
30 June 2016	150 000	28 591	121 409	355 105
30 June 2017	150 000	21 306	128 694	226 411
30 June 2018	150 000	13 589	136 411	90 000
30 June 2018	90 000		90 000	-
	540 000	63 486	476 514	-

2. Accounting for the lease in the books of Tyres Ltd (lessor)

Journal Entries

1 July 2015

Processing plant	Dr	467 100	
Cash	Cr		467 100
(Purchase of plant from Squeal Ltd)			

Lease receivable	Dr	467 100	
Processing plant	Cr		467 100
(Recognition of lease agreement)			

Lease receivable	Dr	9 414	
Cash	Cr		9 414
(Payment of initial direct costs)			

30 June 2016

Cash	Dr	165 000	
Lease receivable	Cr		121 409
Interest revenue	Cr		28 591
Reimbursement revenue	Cr		15 000
(First lease receipt in arrears)			

Maintenance expense	Dr	15 000	
Cash/Payable	Cr		15 000
(Maintenance costs incurred)			

30 June 2017

Cash	Dr	165 000	
Lease receivable	Cr		128 694
Interest revenue	Cr		21 306
Reimbursement revenue	Cr		15 000
(Second lease receipt in arrears)			

Maintenance expense	Dr	15 000	
Cash/Payable	Cr		15 000
(Maintenance costs incurred)			

30 June 2018

Cash	Dr	165 000	
Lease receivable	Cr		136 411
Interest revenue	Cr		13 589
Reimbursement revenue	Cr		15 000
(Third lease receipt in arrears)			

Maintenance expense	Dr	15 000	
Cash/Payable	Cr		15 000
(Maintenance costs incurred)			

Processing plant	Dr	90 000	
Lease receivable	Cr		90 000
(Return of processing plant)			

PART D – LEASE CANCELLABLE WITHOUT PENALTY

As the lease is now cancellable without penalty the lease can no longer be classified as a finance lease and thus should be treated as an operating lease. The consequences are:

From Squeal Ltd's perspective

1. the leased asset is not capitalised – no asset/liability is raised on 1 July 2015
2. the profit on the sale of the processing plant can be recognised immediately in the statement of profit or loss and other comprehensive income
3. the lease payment is treated as an expense item when paid.
4. no depreciation expense is recorded

Journal Entries

1 July 2015

Cash	Dr	467 100	
Gain on sale	Cr		67 100
Processing plant	Cr		400 000
(Sale of plant under sale and leaseback agreement)			

30 June 2016

Rental expense	Dr	150 000	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(First lease payment in arrears)			

30 June 2017

Rental expense	Dr	150 000	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(Second lease payment in arrears)			

30 June 2018

Rental expense	Dr	150 000	
Executory costs expense	Dr	15 000	
Cash	Cr		165 000
(Third lease payment in arrears)			

PART E – LESSOR A MANUFACTURER/DEALER

If Tyres Ltd had manufactured the plant at cost of $400 000 then this would not be a sale and leaseback transaction. Accordingly, the following changes to the answer would occur:

- Tyres Ltd (lessor) would record the initial direct costs as an expense

- The lease receivable recorded by Tyres Ltd would revert back to the fair value of $467 100 and the interest rate implicit in the lease would change to approx. 7%*.

  * $150 000 x 2.6243 + $90 000 x 0.8163
  = $393 645 + $73 467
  = $467 112

- The initial entry to record the lease in Tyres Ltd's books would change to:

Lease receivable	Dr	467 100	
Sales revenue	Cr		*442 623
Cost of sales	Dr	**375 523	
Processing plant	Cr		400 000
(Initial recognition of lease and recording sale of plant)			

** Using 7%, PV of MLP = $150 000 x 2.6243 + $60 000 x 0.8163*
***[$400 000 (cost of plant) less $24 489 (PV of unguaranteed residual value)*
= $30 000 x 0.8163]

Lease establishment expense	Dr	9 414	
Cash	Cr		9 414
(Payment of establishment costs)			

Thus, a profit on 'sale' of $67 100 (net of initial direct costs) would be recorded.

- Squeal Ltd (lessee) would have no 'sale' of plant entries and would simply record the leased asset/lease liability. As a result there would be no amortisation of the gain over the lease term.