Reading: Odomirok.15-P (Schedule P (Model - 2017.Spring Q13)) 01a-Question
Model: Text Example of Intercompany Pooling from p186 (similar to 2017.Spring #13ab)
Problem Type: Schedule P (& non-Schedule P) losses & premiums for INTERCOMPANY POOLING

Given In this problem, net refers to amounts net of outside reinsurance
*(versus net of **internally ceded** amounts **based on pool %**)*

company	pool %	direct loss & LAE	ceded to outside insurers	net loss & LAE
A (lead)	60%	$ 200	$ -	$ 200
B	20%	$ 130	$ -	$ 130
C	20%	$ 70	$ -	$ 70
total	**100%**	**$ 400**	**$ -**	**$ 400**

no cession to outside reinsurers

Find
(a) **Schedule P** gross reserves
(b) **Schedule P** net reserves
(c) **non-Schedule P** gross reserves
(d) **non-Schedule P** net reserves

Concept
* It doesn't matter whether you're dealing with losses or premiums.
* The key is whether it's a **Schedule P** exhibit or a **non-Schedule P** exhibit

Schedule P:
GROSS reserves for each company: (total direct loss & LAE) x (pool %)
NET reserves for each company: (total net loss & LAE) x (pool %)

non-Schedule P:
GROSS reserves for each company:
A (lead): A (direct) + B (net) + C (net)
B (non-lead): B (direct) + (total net) x (B pool %) **<-- this one is tricky**
C (non-lead): C (direct) + (total net) x (C pool %) **<-- this one is tricky**

NET reserves for each company: same as for Schedule P

	Schedule P		non-Schedule P	
company	gross loss & LAE	net loss & LAE	gross loss & LAE	net loss & LAE
A (lead)	$ 240	$ 240	$ 400	$ 240
B	$ 80	$ 80	$ 210	$ 80
C	$ 80	$ 80	$ 150	$ 80
total	**$ 400**	**$ 400**	**$ 760**	**$ 400**

The **non-Schedule P** gross column looks wrong. **It isn't!** According to Odomirok:

Lead **A** **internally assumes** everything from non-lead companies *(that wasn't ceded to outside reinsurers)*

A gross	=	A (direct)	+	B (net)	+	C (net)
	=	$ 200	+	$ 130	+	$ 70
	=	$ 400				

ceded internally to ***A***

Non-lead **B** & **C** **internally re-assume** their pool % from **A's** gross amount above

B gross	=	B (direct)	+	(total net)	x	(B pool %)
	=	$ 130	+	$ 400	x	20%
	=	$ 130	+	$ 80	←	*assumed internally from* ***A***
	=	210				

C gross	=	C (direct)	+	(total net)	x	(C pool %)
	=	$ 70	+	$ 400	x	20%
	=	$ 70	+	$ 80	←	*assumed internally from* ***A***
	=	150				

The gross amounts for all companies double-count the internally ceded amounts.

- *A's gross amount includes the internal cession from the non-lead companies B & C*
- *But B & C's gross amounts also include the internal cession BACK from A*

Reading: Odomirok.15-P (Schedule P (Model - 2017.Spring Q13)) 02a-Question
Model: Text Example of Intercompany Pooling from p186 (similar to 2017.Spring #13ab)
Problem Type: Schedule P (& non-Schedule P) losses & premiums for INTERCOMPANY POOLING

Given In this problem, net refers to amounts net of outside reinsurance
*(versus net of **internally ceded** amounts **based on pool %**)*

company	pool %	direct loss & LAE	ceded to outside insurers	net loss & LAE
A (lead)	80%	$ 100	$ -	$ 100
B	10%	$ 70	$ -	$ 70
C	10%	$ 30	$ -	$ 30
total	**100%**	**$ 200**	**$ -**	**$ 200**

no cession to outside reinsurers

Find
(a) **Schedule P** gross reserves
(b) **Schedule P** net reserves
(c) **non-Schedule P** gross reserves
(d) **non-Schedule P** net reserves

Concept
* It doesn't matter whether you're dealing with losses or premiums.
* The key is whether it's a **Schedule P** exhibit or a **non-Schedule P** exhibit

Schedule P:
GROSS reserves for each company: (total direct loss & LAE) x (pool %)
NET reserves for each company: (total net loss & LAE) x (pool %)

non-Schedule P:
GROSS reserves for each company:
A (lead): A (direct) + B (net) + C (net)
B (non-lead): B (direct) + (total net) x (B pool %) **<-- this one is tricky**
C (non-lead): C (direct) + (total net) x (C pool %) **<-- this one is tricky**

NET reserves for each company: same as for Schedule P

	Schedule P		non-Schedule P	
company	gross loss & LAE	net loss & LAE	gross loss & LAE	net loss & LAE
A (lead)	$ 160	$ 160	$ 200	$ 160
B	$ 20	$ 20	$ 90	$ 20
C	$ 20	$ 20	$ 50	$ 20
total	**$ 200**	**$ 200**	**$ 340**	**$ 200**

The **non-Schedule P** gross column looks wrong. **It isn't!** According to Odomirok:

Lead **A** **internally assumes** everything from non-lead companies *(that wasn't ceded to outside reinsurers)*

A gross	=	A (direct)	+	B (net)	+	C (net)
	=	$ 100	+	$ 70	+	$ 30
	=	$ 200				

ceded internally to ***A***

Non-lead **B** & **C** **internally re-assume** their pool % from **A's** gross amount above

B gross	=	B (direct)	+	(total net)	x	(B pool %)	
	=	$ 70	+	$ 200	x	10%	
	=	$ 70	+	$ 20			*assumed internally from* ***A***
	=	90					

C gross	=	C (direct)	+	(total net)	x	(C pool %)	
	=	$ 30	+	$ 200	x	10%	
	=	$ 30	+	$ 20			*assumed internally from* ***A***
	=	50					

The gross amounts for all companies double-count the internally ceded amounts.

- *A's gross amount includes the internal cession from the non-lead companies B & C*
- *But B & C's gross amounts also include the internal cession BACK from A*

Reading: Odomirok.15-P (Schedule P (Model - 2017.Spring Q13)) 03a-Question
Model: Text Example of Intercompany Pooling from p186 (similar to 2017.Spring #13ab)
Problem Type: Schedule P (& non-Schedule P) losses & premiums for INTERCOMPANY POOLING

Given In this problem, net refers to amounts net of outside reinsurance
*(versus net of **internally ceded** amounts **based on pool %**)*

company	pool %	direct loss & LAE	ceded to outside insurers	net loss & LAE
A (lead)	80%	$ 500	$ -	$ 500
B	10%	$ 340	$ -	$ 340
C	10%	$ 140	$ -	$ 140
total	**100%**	**$ 980**	**$ -**	**$ 980**

no cession to outside reinsurers

Find
(a) **Schedule P** gross reserves
(b) **Schedule P** net reserves
(c) **non-Schedule P** gross reserves
(d) **non-Schedule P** net reserves

Concept
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NET reserves for each company: (total net loss & LAE) x (pool %)

non-Schedule P:
GROSS reserves for each company:
A (lead): A (direct) + B (net) + C (net)
B (non-lead): B (direct) + (total net) x (B pool %) **<-- this one is tricky**
C (non-lead): C (direct) + (total net) x (C pool %) **<-- this one is tricky**

NET reserves for each company: same as for Schedule P

	Schedule P		non-Schedule P	
company	gross loss & LAE	net loss & LAE	gross loss & LAE	net loss & LAE
A (lead)	$ 784	$ 784	$ 980	$ 784
B	$ 98	$ 98	$ 438	$ 98
C	$ 98	$ 98	$ 238	$ 98
total	**$ 980**	**$ 980**	**$ 1,656**	**$ 980**

The **non-Schedule P** gross column looks wrong. **It isn't!** According to Odomirok:

Lead **A** **internally assumes** everything from non-lead companies *(that wasn't ceded to outside reinsurers)*

A gross	=	A (direct)	+	B (net)	+	C (net)
	=	$ 500	+	$ 340	+	$ 140
	=	$ 980				

ceded internally to ***A***

Non-lead **B** & **C** **internally re-assume** their pool % from **A's** gross amount above

B gross	=	B (direct)	+	(total net)	x	(B pool %)	
	=	$ 340	+	$ 980	x	10%	
	=	$ 340	+	$ 98			*assumed internally from* ***A***
	=	438					

C gross	=	C (direct)	+	(total net)	x	(C pool %)	
	=	$ 140	+	$ 980	x	10%	
	=	$ 140	+	$ 98			*assumed internally from* ***A***
	=	238					

The gross amounts for all companies double-count the internally ceded amounts.

- *A's gross amount includes the internal cession from the non-lead companies B & C*
- *But B & C's gross amounts also include the internal cession BACK from A*

Reading: Odomirok.15-P (Schedule P (Model - 2017.Spring Q13)) 04a-Question
Model: Text Example of Intercompany Pooling from p186 (similar to 2017.Spring #13ab)
Problem Type: Schedule P (& non-Schedule P) losses & premiums for INTERCOMPANY POOLING

Given In this problem, net refers to amounts net of outside reinsurance
*(versus net of **internally ceded** amounts **based on pool %**)*

company	pool %	direct loss & LAE	ceded to outside insurers	net loss & LAE
A (lead)	70%	$ 1,000	$ -	$ 1,000
B	10%	$ 600	$ -	$ 600
C	20%	$ 370	$ -	$ 370
total	**100%**	**$ 1,970**	**$ -**	**$ 1,970**

no cession to outside reinsurers

Find
(a) **Schedule P** gross reserves
(b) **Schedule P** net reserves
(c) **non-Schedule P** gross reserves
(d) **non-Schedule P** net reserves

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non-Schedule P:
GROSS reserves for each company:
A (lead): A (direct) + B (net) + C (net)
B (non-lead): B (direct) + (total net) x (B pool %) **<-- this one is tricky**
C (non-lead): C (direct) + (total net) x (C pool %) **<-- this one is tricky**

NET reserves for each company: same as for Schedule P

	Schedule P		non-Schedule P	
company	gross loss & LAE	net loss & LAE	gross loss & LAE	net loss & LAE
A (lead)	$ 1,379	$ 1,379	$ 1,970	$ 1,379
B	$ 197	$ 197	$ 797	$ 197
C	$ 394	$ 394	$ 764	$ 394
total	**$ 1,970**	**$ 1,970**	**$ 3,531**	**$ 1,970**

The **non-Schedule P** gross column looks wrong. **It isn't!** According to Odomirok:

Lead **A** **internally assumes** everything from non-lead companies *(that wasn't ceded to outside reinsurers)*

A gross	=	A (direct)	+	B (net)	+	C (net)
	=	$ 1,000	+	$ 600	+	$ 370
	=	$ 1,970				

ceded internally to ***A***

Non-lead **B** & **C** **internally re-assume** their pool % from **A's** gross amount above

B gross	=	B (direct)	+	(total net)	x	(B pool %)
	=	$ 600	+	$ 1,970	x	10%
	=	$ 600	+	$ 197	←	*assumed internally from* ***A***
	=	797				

C gross	=	C (direct)	+	(total net)	x	(C pool %)
	=	$ 370	+	$ 1,970	x	20%
	=	$ 370	+	$ 394	←	*assumed internally from* ***A***
	=	764				

The gross amounts for all companies double-count the internally ceded amounts.

- *A's gross amount includes the internal cession from the non-lead companies B & C*
- *But B & C's gross amounts also include the internal cession BACK from A*