Reading: Odomirok.18-IEE (IEE Net Inv Gain - 2016.Spring Q11) a-Question
Model: 2016.Spring #11
Problem Type: Net Investment Gain (NIG): value *(using prepaid expense ratio)*

Given

Homeowners Data	notation	prior CY	current CY
net loss reserve	L	2,200	2,500
net LAE reserve	LAE	350	300
net UEP reserve	UEP	4,500	5,000
ceded reins. premium payable	re	15	35
prepaid expense ratio	PPER	30%	30%
agents' balances	AB	4,200	3,600

Net Investment Gain Ratio (NIGR): 5%

Find Net Investment Gain attributable to Insurance Transactions for Homeowenrs ($NIGIT_H$)

Note: "NIGR" is pronounced like the country *Niger* .

Let m(x) = mean value of (prior CY value of x , current CY value of x)

Formula: $NIGIT_H$ = NIGR x $FAIT_H$ = 5% x 2,125 = 106.3

(final answer)

NIGR = 5% <== given

Note: $FAIT_H$ = *Funds Attributable to Insurance Transactions* = 2,125 <== see below

$FAIT_H = m(L_H) + m(LAE_H) + m(UEP_H) + m(re_H) - m(AB_H) - (PPE\ for\ UEP)_H$

where:

$m(L_H)$	=	(	2,200	+	2,500	)	/ 2	= 2,350
$m(LAE_H)$	=	(	350	+	300	)	/ 2	= 325
$m(UEP_H)$	=	(	4,500	+	5,000	)	/ 2	= 4,750
$m(re_H)$	=	(	15	+	35	)	/ 2	= 25
$m(AB_H)$	=	(	4,200	+	3,600	)	/ 2	= 3,900

$(PPE\ for\ UEP)_H$ = *see below for calculation of this term*

The new part in this problem deals with the PrePaid Expense Ratio (PPER) & the PrePaid Expense (PPE)

$PPER_H$: this ratio is for determining the amount of UEP reserve representing PPE (PrePaid Expenses)

According to Odomirok:

$PPER_H$ = $(net\ acquisition\ expense)_H$ / NWP_H

And we're given this value: *(No value provided for the current CY ==> assume same as prior CY)*

$PPER_H$ = 30%

So all we have to do is **apply** $PPER_H$ to $m(UEP_H)$ to get $(PPE\ for\ UEP)_H$:

$(PPE\ for\ UEP)_H = PPER_H \times m(UEP_H)$

THEREFORE:

$(PPE\ for\ UEP)_H$ = 30% x 4,750 = 1,425 <== now we have all the pieces

so that

$FAIT_H = m(L_H) + m(LAE_H) + m(UEP_H) + m(re_H) - m(AB_H) - (PPE\ for\ UEP)_H$

$= 2{,}350 + 325 + 4{,}750 + 25 - 3{,}900 - 1{,}425$

$FAIT_H$ = 2,125 <== substitute this into the formula at the top to get NIGR