(invested capital - 2018. Spring Q12) a-Question

Reading: Feldblum.Surplus
Model: 2018.Spring #12

**Problem Type:** invested capital & PV(future income)

**Given** From a company's CY annual statement:

statutory surplus	S	200
deferred tax assets	DTA	25
unearned premium reserve	UEP	150
undiscounted loss reserve	R	400

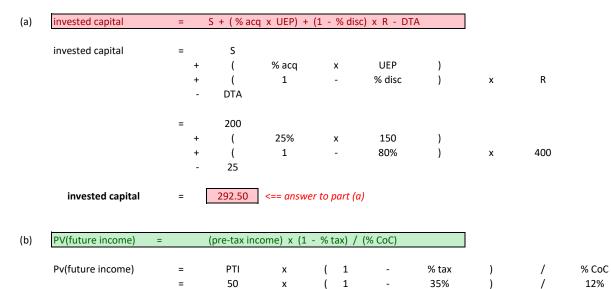
Other junk you need to solve the problem:

written premium (annual)	WP	300
pre-tax income (annual)	PTI	50
cost of liquidation	CoL	30
cost of capital	% CoC	12%
tax rate	% tax	35%
pre-paid acquisition cost	% acq	25%
discount factor for loss reserves	% disc	80%

Find (a) invested capital for given CY

(b) present value or PV(future income)

(c) would the shareholders prefer <u>liquidation</u> or <u>continued operation</u> of the company



(c) **Decision Table:** (InvCap = invested capital, CoL = Cost of Liquidation)

270.8

InvCap - CoL	>	PV(future income)	==>	liquidate
InvCap - CoL	<	PV(future income)	==>	continue operations
InvCap - CoL	=	PV(future income)	==>	doesn't matter (maybe look at income trends?)

<== answer to part (b)

## For this problem we have:

Pv(future income)

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InvCap - CoL = 262.50
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## This leads to the final answer below:

invested cap CoL	<	PV(future income)	==>	continue operations	<== answer to part (c)
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## **Bonus Question**

Assuming all but the indicated variables are fixed, what value of that variable would make the choice between liquidation and continued operations irrelevant?

- (i) tax rate
- (ii) pre-tax income