

Handwritten Quiz

Introduction to Financial Statements

ASimpleModel.com

Notes on Learning



Illusion of Fluency: If you read a text or watch a video explanation several times it is not uncommon for the human mind to mistake familiarity with mastery of content. This is particularly true if the explanation covers a complex topic in a lucid and easy-to-follow format. Under these circumstances it's possible to convince yourself that it's all pretty simple and you knew it all along.¹

Not until you are asked to produce explanations yourself will you realize what you truly do and do not recall. *This makes testing and feedback integral to the learning process.* It also suggests that learning may not always feel natural. If fluency illusions result from lucid presentations of concepts, it follows that struggling with the material can be beneficial to learning:

“We usually think of interference as a detriment to learning, but certain kinds of interference can produce learning benefits, and the positive effects are sometimes surprising. Would you rather read an article that has normal type or type that's somewhat out of focus? Almost surely you would opt for the former. Yet when text on a page is slightly out of focus or presented in a font that is a little difficult to decipher, people recall the content better.”²

If you find yourself struggling with the quiz questions, resist the urge to look up answers immediately. Do your best to answer and then retrieve the answer. It will enhance the learning process.

The Power of Handwritten Notes: There is only so much that can be accomplished with multiple choice and fill-in-the-blank quizzes. These formats are helpful because they provide the ability to immediately show results, which is critical to the learning process. But between the two, research shows that fill-in-the-blank is more effective because it requires retrieving the answer from memory without the ease of selecting from a list of options. It follows, that writing answers in longhand takes this benefit a step further, even more so than typing:

“Students who took handwritten notes generally outperformed students who typed their notes via computer, researchers at Princeton University and the University of California at Los Angeles found.”³

Vocabulary: In my experience, people who claim that they simply cannot understand finance don't spend enough time on vocabulary. The math is pretty simple. It's just explained in a different language. Learn the language and everything else will follow.

To help with this I have created the following exercise: Complete the pages that follow by hand and without any aids. If you find yourself struggling with any of the vocabulary, take the time to stop and write the definition in your own words. **The answers are *not* included. You will find a reference to the source material at the bottom of each slide. The idea is to encourage ASM users to go back to the material and find or confirm their own answers. Good luck!**

1. Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel, Make it Stick: The Science of Successful Learning (Cambridge: The Belknap Press of Harvard University Press, 2014), p. 116

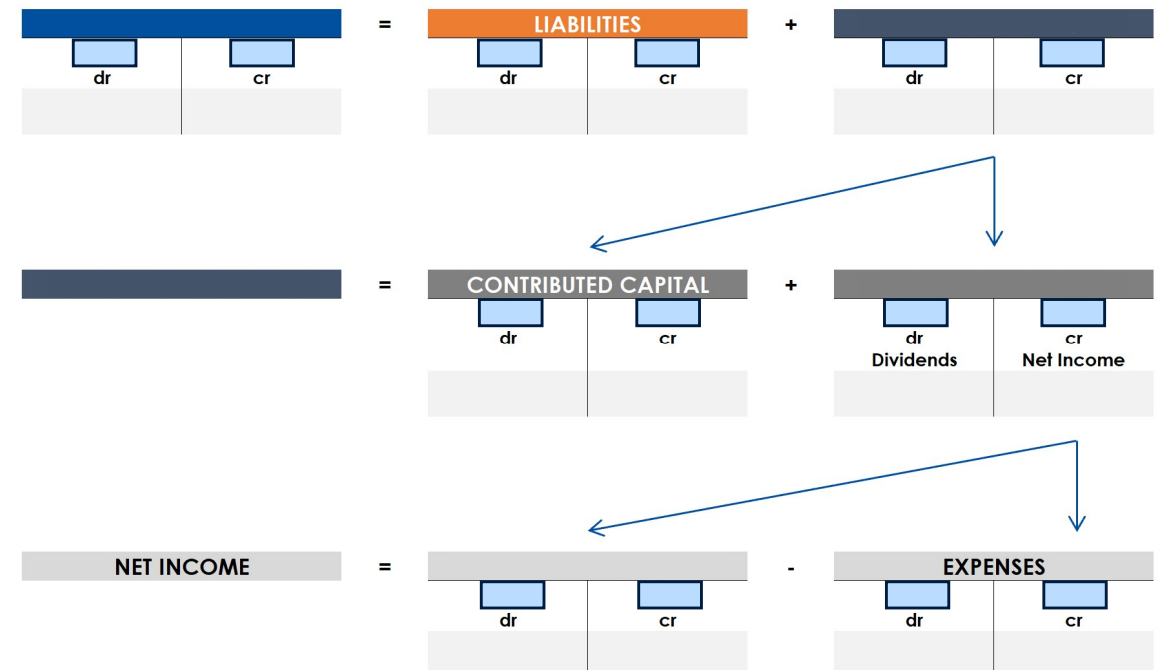
2. Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel, Make it Stick: The Science of Successful Learning (Cambridge: The Belknap Press of Harvard University Press, 2014), p. 87

3. Hotz, Robert Lee. "The Power of Handwriting." The Wall Street Journal 5 April 2016. Print

Handwritten Quiz

List and define the three components of the accounting equation. Provide examples of each:

Label the titles missing in the image below and fill in the blanks (indicated by):



Handwritten Quiz



Describe the purpose of the income statement:

Fill in the blanks (indicated by):

INCOME STATEMENT	20X1	20X2
<input type="text"/>	74,452	83,492
Growth (%)	NA	12.1%
<input type="text"/>	64,440	72,524
% of Sales	86.6%	86.9%
Gross Profit	10,012	10,968
% of Sales	13.4%	13.1%
<input type="text"/>	6,389	6,545
% of Sales	8.6%	7.8%
Operating Income (EBIT)	3,623	4,423
Interest Expense	518	474
Pretax Income	3,105	3,949
<input type="text"/>	1,087	1,382
Tax Rate	NM	NM
Net Income	2,018	2,567
<input type="text"/>	3,623	4,423
Depreciation	2,648	2,981
Amortization	0	0
EBITDA	6,271	7,404

Handwritten Quiz



Additional Income Statement Questions:

- Which line item most likely include depreciation?
- What does SG&A stand for? Why is it helpful to separate this expense category?
- Why are values measured as a percentage of sales on the income statement, but not on the cash flow statement?

Handwritten Quiz



Describe the purpose of the balance sheet:

Fill in the blanks (indicated by):

BALANCE SHEET		20X1
ASSETS		
Current Assets		
<input type="text"/>		-
Accounts Receivable		-
<input type="text"/>		-
Prepaid Expenses		-
Total Current Assets		-
Fixed Assets		
<input type="text"/>		-
TOTAL ASSETS		-
LIABILITIES		
Current Liabilities		
<input type="text"/>		-
Line of Credit		-
Current Maturities of Long Term Debt		-
Total Current Liabilities		-
Long Term Liabilities		
Long Term Debt, Net of <input type="text"/>		-
TOTAL LIABILITIES		-
EQUITY		
<input type="text"/>		-
Additional Paid In Capital		-
<input type="text"/>		-
TOTAL EQUITY		-
TOTAL LIABILITIES & EQUITY		-
Check		-

Handwritten Quiz

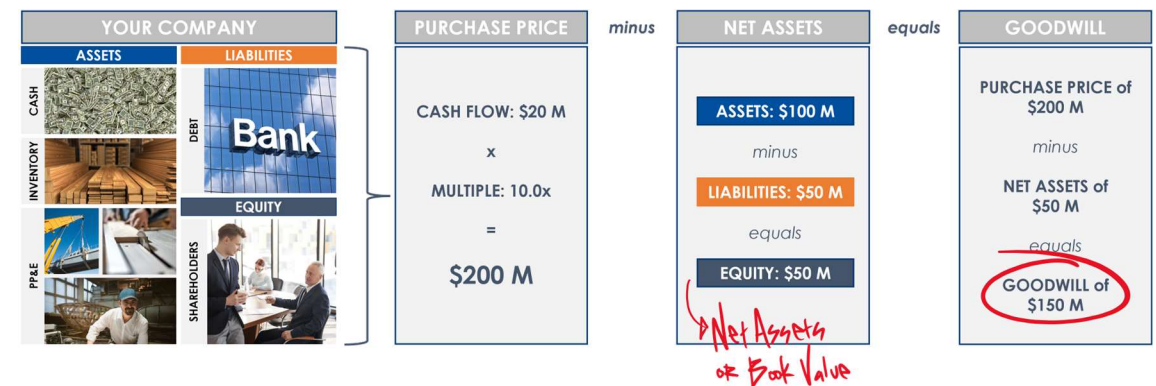
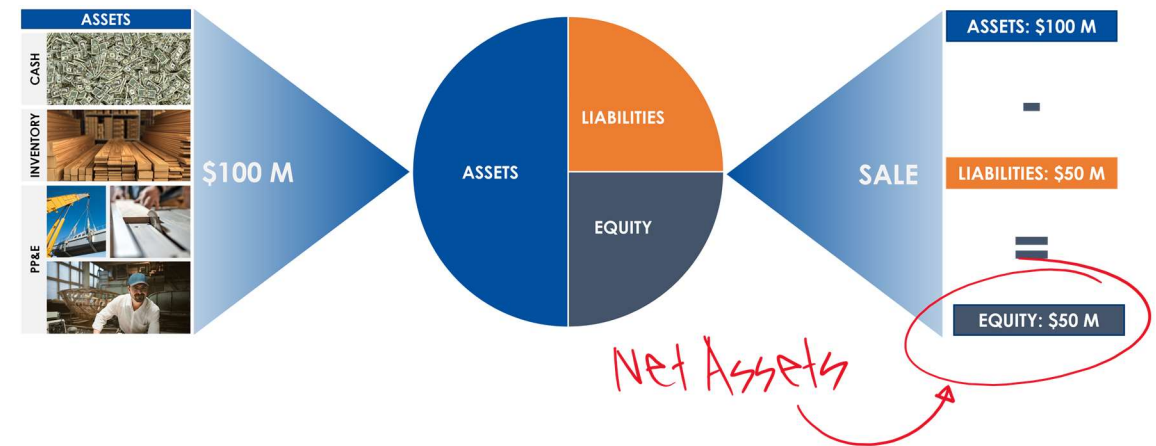
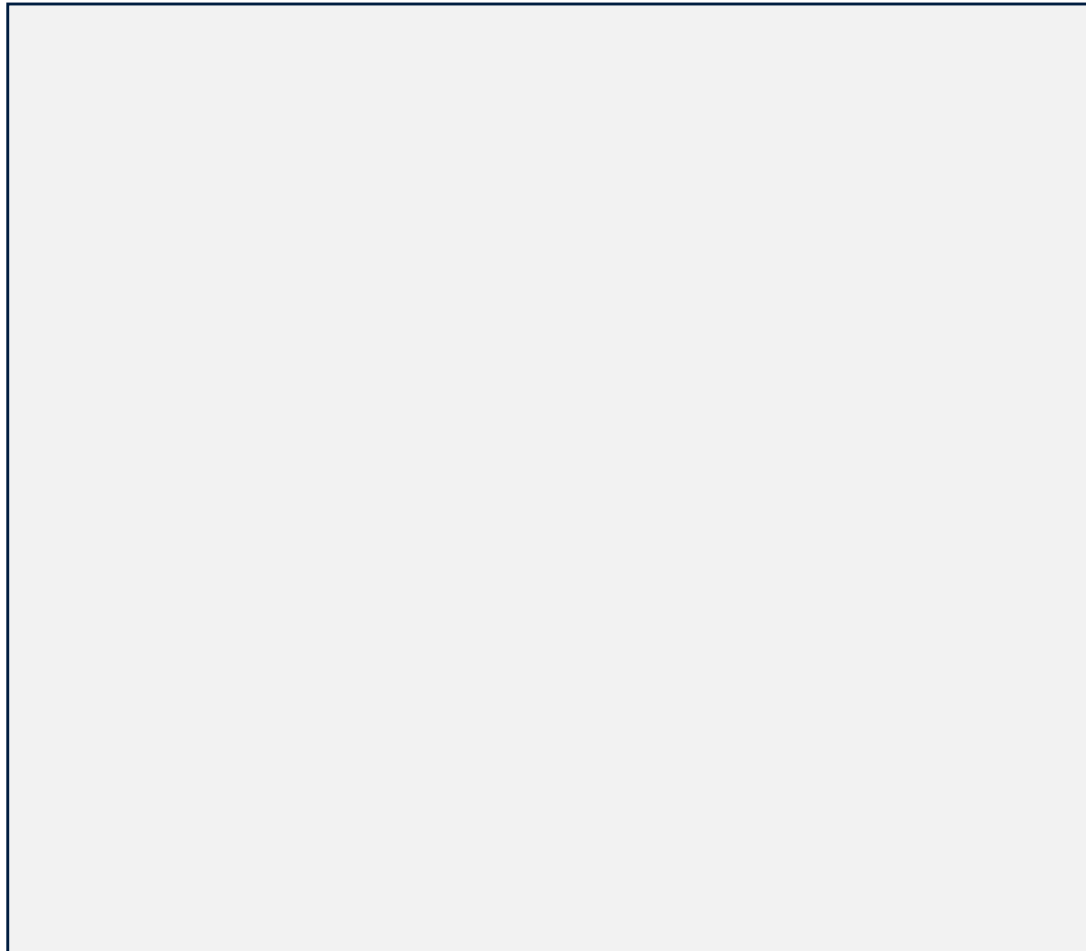


Additional Balance Sheet Questions:

- Why does “Retained Earnings” grow in value while the other two line items visible under stockholders’ equity appear constant?
- What is the “Check” on the bottom of the balance sheet?
- What are the three ways a company can build cash on the balance sheet?

Handwritten Quiz

Using the images on the right, define goodwill in the context of an acquisition:



Handwritten Quiz



Describe the purpose of the cash flow statement:

Fill in the blanks (indicated by):

20X1	
Cash Flow from Operating Activities	
	\$0.0
Add Back Non-Cash Items	\$0.0
Changes in Working Capital	
Change in 	\$0.0
Change in Inventory	\$0.0
Change in 	\$0.0
Net Cash (CFO)	\$0.0
Cash Flow from Activities	
	\$0.0
Net Cash (CFI)	\$0.0
Cash Flow from Activities	
	\$0.0
Net Cash (CFF)	\$0.0
	\$0.0
Beginning Cash Balance	\$0.0
Ending Cash Balance	\$0.0

Handwritten Quiz



Additional Cash Flow Statement Questions:

- Why are depreciation and amortization added back to net income?
- Why does an increase in accounts receivable on the balance sheet appear as cash outflow on the cash flow statement?
- Why don't capital expenditures flow through the income statement?

Handwritten Quiz



Write your own description of how the three financial statements are linked. Before you write your answer, consider why the following bullets are relevant:

- Accrual vs. Cash Accounting
- How the Cash Flow Statement Starts
- How Retained Earnings Grows

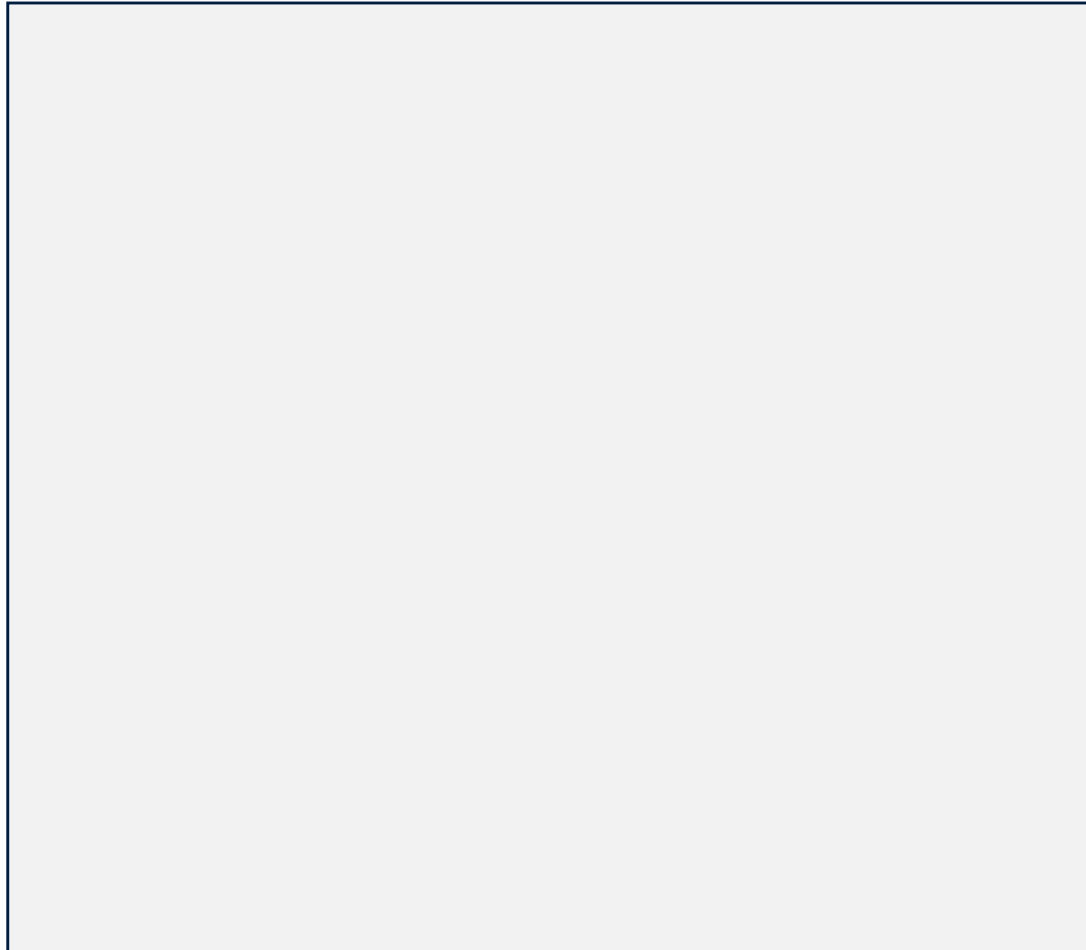
A large, empty rectangular box with a thin black border, intended for the user to write their handwritten answer to the quiz question.

This question is answered throughout the series. If you are struggling to answer it, please review the course materials.

Handwritten Quiz



Using the image on the right, explain how the cash flow statement balances a financial model:



INCOME STATEMENT				
	20X1	20X2	20X3	20X4
Revenue	1,000	1,100	1,210	1,331
Cost of Goods Sold	600	660	726	799
Gross Profit	400	440	484	532
Operating Expenses (SG&A)	150	165	182	200
Operating Income (EBIT)	250	275	303	333
Interest Expense	43	38	33	28
Pretax Income	208	238	270	305
Income Tax Expense	73	83	95	107
Net Income	135	154	176	198

BALANCE SHEET				
	20X1	20X2	20X3	20X4
Cash	500	576	678	807
Accounts Receivable	82	90	99	109
Inventory	99	108	119	131
Total Current Assets	681	775	897	1,047
Property Plant & Equipment (PP&E)	500	515	525	528
TOTAL ASSETS	1,181	1,290	1,421	1,575
Accounts Payable	49	54	60	66
Current Portion on Long Term Debt	50	50	50	50
Total Current Liabilities	99	104	110	116
Long Term Debt	400	350	300	250
TOTAL LIABILITIES	499	454	410	366
Common Stock	100	100	100	100
Retained Earnings	582	736	911	1,110
TOTAL EQUITY	682	836	1,011	1,210
TOTAL LIABILITIES & EQUITY	1,181	1,290	1,421	1,575
Check	0.0	0.0	0.0	0.0

CASH FLOW STATEMENT				
	20X1	20X2	20X3	20X4
CASH FLOW FROM OPERATING ACTIVITIES				
Net Income		154	176	198
Add Back Non-Cash Items				
Depreciation		55	61	67
Amortization		0	0	0
Changes in Working Capital				
Accounts Receivable		(8)	(9)	(10)
Inventory		(10)	(11)	(12)
Accounts Payable		5	5	6
Net Cash Provided by Operating Activities		196	222	249
CASH FLOW FROM INVESTING ACTIVITIES				
Capital Expenditures - Purchase of PP&E		(70)	(70)	(70)
Net Cash Used in Investing Activities		(70)	(70)	(70)
CASH FLOW FROM FINANCING ACTIVITIES				
Revolving Credit Facility		0	0	0
Long Term Debt (Current Portion)		(50)	(50)	(50)
Net Cash Provided by (Used in) Fnce Activities		(50)	(50)	(50)
Net Cash Flow		76	102	129

Handwritten Quiz



The shaded regions below match the legend visible at the bottom of the image. Fill in the blanks to indicate the source of the information.

Cash Flow Statement	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025
Cash Flow from Operating Activities							
Net Income			4,861,373	5,738,023	6,727,366	7,831,765	9,054,038
Add Back Non-Cash Items							
Depreciation			900,955	991,050	1,090,155	1,199,171	1,319,088
Amortization			118,000	118,000	118,000	118,000	118,000
Total Non-Cash Adjustments			1,018,955	1,109,050	1,208,155	1,317,171	1,437,088
Operating Cash Flow Before Working Capital			5,880,328	6,847,073	7,935,521	9,148,936	10,491,126
Changes in Working Capital							
Accounts Receivable			(1,007,404)	(594,219)	(653,641)	(719,005)	(790,905)
Inventory			(896,695)	(487,375)	(536,113)	(589,724)	(648,697)
Accounts Payable			466,269	245,764	270,341	297,375	327,112
Accruals Expenses			285,358	191,617	210,779	231,857	255,042
Total Changes in Working Capital			(1,152,471)	(644,213)	(708,634)	(779,498)	(857,448)
Cash Flow from Operations			4,727,857	6,202,860	7,226,887	8,369,438	9,633,678
Cash Flow from Investing Activities							
Capital Expenditures			(1,501,592)	(1,651,751)	(1,816,926)	(1,998,618)	(2,198,480)
Cash Flow from Investing			(1,501,592)	(1,651,751)	(1,816,926)	(1,998,618)	(2,198,480)
Cash Flow from Financing Activities							
Revolving Line of Credit			-	-	-	-	-
Term Debt			(2,863,133)	(3,563,965)	(4,773,087)	(5,213,972)	(6,148,183)
Subordinated Debt			-	-	-	-	-
Cash Flow from Financing Activities			(2,863,133)	(3,563,965)	(4,773,087)	(5,213,972)	(6,148,183)
Net Cash Flow			363,133	987,145	636,874	1,156,848	1,287,015
Beginning Cash Balance			-	363,133	1,350,278	1,987,152	3,144,000
Ending Cash Balance			363,133	1,350,278	1,987,152	3,144,000	4,431,014



Handwritten Quiz



Bonus Exercise: Start reading through 10-Ks (annual reports) and pay attention to the notes. Read the shareholder letters and think about what the CEO is attempting to communicate to individuals interested in the company's ability to create value. You will come across sections like "Summary of Significant Accounting Policies" and "Recent Accounting Pronouncements" that appear dense and possibly not worth your time. Read them with Investopedia handy; it's an education in accounting. I have included a couple examples that highlight some of the first places to look when you begin flipping through annual reports. In the order that they appear, the quotes selected highlight the following:

- Source of Revenue: Has the business moved away from its core focus?
- Working Capital: Is the business mismanaging working capital, and what impact will this have on cash (liquidity)?

John Deere: Make sense of the following: "The one-time blacksmith shop has become a kind of bank - at least, operating income from the Deere Captive finance unite, John Deere Capital Corp., has grown to eclipse the earnings from shrinking equipment sales. Of overall operating income in the three months to Jan. 31 ag and turf sales chipped in \$144 million, or 35%; financing activity, \$194 million, or 48%. As recently as fiscal 2013, the respective contributions to operating income were 79% and 15%."

- Grant's Interest Rate Observer (March 11, 2016)

Under Armour: Make sense of the following: "We suggest that the company's stock would be lower if analysts were more curious. The first quarter was the second consecutive quarter in which year-over-year growth in inventories and accounts receivable surpassed revenue growth by more than 10 percentage points; inventories leapt by 44%, accounts receivable by 43%."

- Grant's Interest Rate Observer (May 6, 2016)

Note: Annual reports can be found on the company's investor relations page or at www.SEC.gov.