

MGT 402: Basics of Accounting

Practice Problem Set 1

Question 1 (30 points): Dolphin Corp.

Below is a balance sheet for Dolphin Corp. as of December 31, 2015:

Dolphin Corp.			
Balance Sheet			
As of Dec. 31, 2015			
Assets		Liabilities and Equities	
Cash	50	Accounts payable	103
Accounts receivable	45	Wages payable	17
Inventory	75	Deferred revenue	52
Prepaid rent	18	Taxes payable	12
Total current assets	188	Notes payable	120
		Total liabilities	304
PPE	378		
Accumulated depreciation	(223)	Common stock	34
Patent, net	110	Retained earnings	115
Total non-current assets	265	Shareholders' equity	149
		Total liabilities & shareholders' equity	453
Total assets	453		

Required: For each of the following events that happened during 2016, indicate how the December 31, 2016 balance sheet and income statement will be affected (**after any necessary adjusting entries and all closing entries**). Indicate the direction of the effect (circle one out of increase/decrease/no effect) and indicate the amount. **If the answer is “no effect”, you must circle it to receive credit.**

1. Sold on account merchandise costing \$38 to customers for \$60.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

2. In December 2016, Dolphin Corp. incurred \$80 for employees' work on a research project. The amount will be paid in the next year.

Total assets	Increase	Decrease	No effect	Amount: _____
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Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

3. In December 2016, Dolphin Corp signed a contract to purchase a machine for \$1000. The machine will be delivered in 2017, and Dolphin will pay after the delivery.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

4. Paid wages in the amount of \$88. At the end of the year, the balance in the wages payable account was \$9, i.e. workers were still owed \$9 for past work performed.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

5. On October 1, 2016, Dolphin Corp. paid for insurance for one year. The annual insurance is \$60 and it is effective immediately.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

6. On January 1, 2016, Dolphin Corp. sold a 4-year warranty for \$200. Warranties relate to the deferred revenue account. No warranty claims were made by customers in 2016.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

7. On July 1, 2016, Dolphin Corp. bought a building by issuing stock with a value of \$800.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

8. The new building purchased on July 1, 2016 has an estimated useful life of 20 years and a residual value of \$80.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

9. Dolphin Corp. repurchased 100 shares of common stock at a price of \$5 dollar per share.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

10. Dolphin Corp. sold a product to a customer on January 1, 2016. In return the buyer agreed to pay \$121 two years later. Dolphin Corp. normally sells the product for \$100, and has decided to charge the buyer 10% interest. The cost of goods sold was \$40.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

11. Sold a plant for \$85. The plant was purchased for \$100 ten years ago and the associated accumulated depreciation at the time of the sale was \$25.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

12. On January 1, 2016, Dolphin retired all notes payable at book value.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

13. On December 1, 2016, Dolphin Corp. declared cash dividends to common shareholders in the amount of \$20. Of these, \$5 were paid on December 30 and the rest are to be paid on February 1, 2017.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

14. On September 1, 2016, Dolphin Corp. paid \$100 cash to acquire XYZ Corp. XYZ Corp. has two assets – inventory and a warehouse, with market values of \$15 and \$90, respectively. Dolphin Corp. also assumed the liability of XYZ Corp: accounts payable of \$30.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

15. On October 1, 2016, Dolphin Corp. purchased inventory on account for \$90.

Total assets	Increase	Decrease	No effect	Amount: _____
Total liabilities	Increase	Decrease	No effect	Amount: _____
Total equity	Increase	Decrease	No effect	Amount: _____
Net income	Increase	Decrease	No effect	Amount: _____

Question 2 (50 points): Facebook Inc.

The questions in this section relate to Facebook's fiscal 2015 financial statements. Facebook's balance sheet, income statement, cash flow statement, and selected footnote disclosures from fiscal 2015 are provided below. Please show your work to be considered for partial credit. Some questions are easier than others, so please pace yourself.

Below is how Facebook describes its business in its annual report:

Our mission is to give people the power to share and make the world more open and connected. Our top priority is to build useful and engaging products that enable people to connect and share through mobile devices and personal computers. We also help people discover and learn about what is going on in the world around them, enable people to share their opinions, ideas, photos and videos, and other activities with audiences ranging from their closest friends to the public at large, and stay connected everywhere by accessing our products, including Facebook, Instagram, Messenger, WhatsApp and Oculus.

FACEBOOK, INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except for number of shares and par value)

	December 31,	
	2015	2014
Assets		
Current assets:		
Cash and cash equivalents	\$ 4,907	\$ 4,315
Marketable securities	13,527	6,884
Accounts receivable, net of allowances for doubtful accounts of \$68 and \$39 as of December 31, 2015 and December 31, 2014, respectively	2,559	1,678
Prepaid expenses and other current assets	659	513
Total current assets	21,652	13,390
Property and equipment, net	5,687	3,967
Intangible assets, net	3,246	3,929
Goodwill	18,026	17,981
Other assets	796	699
Total assets	\$ 49,407	\$ 39,966
 Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 196	\$ 176
Partners payable	217	202
Accrued expenses and other current liabilities	1,449	866
Deferred revenue and deposits	56	66
Current portion of long-term debt	7	114
Total current liabilities	1,925	1,424
Long-term debt, less current portion	107	119
Other liabilities	3,157	2,327
Total liabilities	5,189	3,870
Stockholders' equity:		
Common stock and additional paid-in capital	34,886	30,225
Accumulated other comprehensive loss	(455)	(228)
Retained earnings	9,787	6,099
Total stockholders' equity	44,218	36,096
Total liabilities and stockholders' equity	\$ 49,407	\$ 39,966

See Accompanying Notes to Consolidated Financial Statements.

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Year Ended December 31,		
	2015	2014	2013
Revenue	\$ 17,928	\$ 12,466	\$ 7,872
Costs and expenses:			
Cost of revenue	2,867	2,153	1,875
Research and development	4,816	2,666	1,415
Marketing and sales	2,725	1,680	997
General and administrative	1,295	973	781
Total costs and expenses	11,703	7,472	5,068
Income from operations			
Interest income/(expense), net	6,225	4,994	2,804
(31)	(84)	(50)	
Income before provision for income taxes	6,194	4,910	2,754
Provision for income taxes	2,506	1,970	1,254
Net income	\$ 3,688	\$ 2,940	\$ 1,500

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2015	2014	2013
Cash flows from operating activities			
Net income	\$ 3,688	\$ 2,940	\$ 1,500
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,945	1,243	1,011
Lease abandonment	—	(31)	117
Share-based compensation	2,960	1,786	906
Deferred income taxes	(795)	(210)	(37)
Tax benefit from share-based award activity	1,721	1,853	602
Excess tax benefit from share-based award activity	(1,721)	(1,869)	(609)
Other	17	7	56
Changes in assets and liabilities:			
Accounts receivable	(973)	(610)	(378)
Prepaid expenses and other current assets	(144)	(123)	355
Other assets	(3)	(216)	(142)
Accounts payable	18	31	26
Partners payable	17	(28)	12
Accrued expenses and other current liabilities	513	328	(38)
Deferred revenue	(9)	10	8
Other liabilities	1,365	346	833
Net cash provided by operating activities	8,599	5,457	4,222
Cash flows from investing activities			
Purchases of property and equipment	(2,523)	(1,831)	(1,362)
Purchases of marketable securities	(15,938)	(9,104)	(7,433)
Sales of marketable securities	6,928	8,438	2,988
Maturities of marketable securities	2,310	1,909	3,563
Acquisitions of businesses, net of cash acquired, and purchases of intangible assets	(313)	(4,975)	(368)
Change in restricted cash and deposits	102	(348)	(11)
Other investing activities, net	—	(2)	(1)
Net cash used in investing activities	(9,434)	(5,913)	(2,624)
Cash flows from financing activities			
Net proceeds from issuance of common stock	—	—	1,478
Taxes paid related to net share settlement	(20)	(73)	(889)
Proceeds from exercise of stock options	—	18	26
Repayment of long-term debt	—	—	(1,500)
Principal payments on long-term debt	(119)	(243)	(391)
Excess tax benefit from share-based award activity	1,721	1,869	609
Net cash provided by (used in) financing activities	1,582	1,571	(667)
Effect of exchange rate changes on cash and cash equivalents	(155)	(123)	8
Net increase in cash and cash equivalents	592	992	939
Cash and cash equivalents at beginning of period	4,315	3,323	2,384
Cash and cash equivalents at end of period	\$ 4,907	\$ 4,315	\$ 3,323

Note 1. Summary of Significant Accounting Policies

Organization and Description of Business

Facebook was incorporated in Delaware in July 2004. Our mission is to give people the power to share and make the world more open and connected. We generate substantially all of our revenue from advertising.

Advertising Expense

Advertising costs are expensed when incurred and are included in marketing and sales expenses in the accompanying consolidated statements of income. We incurred advertising expenses of \$281 million, \$135 million, and \$117 million for the years ended December 31, 2015, 2014, and 2013, respectively.

Deferred Revenue and Deposits

Deferred revenue consists of billings in advance of revenue recognition. Deposits relate to unused balances held on behalf of our users.

Intangible assets consist of the following (in millions):

As of December 31, 2015, technological feasibility has not been established for our IPR&D intangible assets. They have no alternative future use and, as such, continue to be accounted for as indefinite-lived intangible assets.

Amortization expense of intangible assets for the years ended December 31, 2015, 2014, and 2013 was \$730 million, \$319 million, and \$145 million, respectively.

	Weighted-Average Remaining Useful Lives (in years)	December 31, 2015			December 31, 2014		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Finite-lived intangible assets:							
Acquired users	5.7	\$ 2,056	\$ (382)	\$ 1,674	\$ 2,056	\$ (85)	\$ 1,971
Acquired technology	3.3	831	(310)	521	813	(144)	669
Acquired patents	6.5	785	(333)	452	773	(239)	534
Trade names	4.1	629	(163)	466	632	(46)	586
Other	3.5	162	(89)	73	164	(55)	109
In-process research and development (IPR&D)		\$ 60	\$ —	\$ 60	\$ 60	\$ —	\$ 60
Total intangible assets		\$ 4,523	\$ (1,277)	\$ 3,246	\$ 4,498	\$ (569)	\$ 3,929

1. (2 points) Did Facebook acquire any other business(es) during fiscal 2015? How can you tell?
2. (2 points) Using information from the income statement and balance sheet only, how much cash dividends did Facebook pay to shareholders during fiscal 2015? How can you tell?
3. (2 points) Give the summary journal entry to record Facebook's advertising costs in fiscal 2015. Assume the advertising costs are paid in cash when incurred.
4. (2 points) As of the end of fiscal 2015, what is the amount that customers legally owe Facebook? What is the amount that Facebook expects to collect?

7. (5 points) Suppose that during fiscal 2015, Facebook retired some intangible assets that were fully amortized (at the time of retirement the intangible assets had a net book value of \$0). What was the amount of intangible assets that were acquired externally during fiscal 2015?
8. (2 points) How did the stock-based compensation expense in fiscal year 2015 affect Facebook's cash flows from operating activities? Be specific.
9. (2 points) Suppose some of Facebook's short-term investments paid dividends totaling \$100. Using U.S. GAAP, what would be the effect on (a) pre-tax income; (b) cash flow from operations; (c) cash flow from investing; and (d) cash flow from financing?

10. (2 points) How much cash did Facebook pay to acquire property and equipment in fiscal 2015?

11. (6 points) Profitability analysis.

a. What is Facebook's ROA for fiscal 2015 (assume a statutory tax rate of 35%)?

b. What is its ROE for fiscal 2015?

c. What does the comparison of ROE and ROA imply about Facebook's ROA relative to its cost of debt?

12. (3 points) Decompose Facebook's ROE for fiscal 2015 into the components of profitability, asset turnover and leverage.

13. (4 points) Liquidity analysis.

- a. Calculate Facebook's current ratio at the end of fiscal 2015.
- b. Calculate Facebook's ratio of operating cash flows to capital expenditures for fiscal 2015.
- c. Based on your answers to parts (a) and (b) above, comment on Facebook's liquidity for fiscal 2015.

14. (2 points) Suppose that, at the beginning of the next fiscal year (i.e., fiscal year 2016) Facebook purchases PP&E and decides to increase the estimated useful life of PP&E relative to the estimate they previously used.

- a. How would this change affect Facebook's net income for fiscal 2016 (relative to what it would have been without the change in estimate)? Circle one of the following:

Increase Decrease No change

- b. How would this change affect Facebook's cash flows from operating activities for fiscal 2016 (relative to what it would have been without the change in estimate)? Circle one of the following:

Increase Decrease No change

- c. How would this change affect Facebook's total assets at the end of fiscal 2016 (relative to what it would have been without the change in estimate)? Circle one of the following:

Increase Decrease No change

15. (2 points) What amount of R&D expense did Facebook incur in fiscal 2015 and 2014, respectively?

16. (6 points) Suppose that the FASB changed the accounting for R&D effective January 1, 2014 and required that R&D costs incurred after that time shall be capitalized and amortized over its useful life. Suppose that Facebook estimated that the useful life of their R&D expenditures is 2 years and residual value is 0. You may assume that all R&D expenditures are paid in cash at the beginning of the year. Ignore tax effects.

 - a. How, if at all, would the amount of total assets, total liabilities, and total equity be different at the end of fiscal year 2015? Be specific about direction and amount.
 - b. How, if at all, would net income be different for fiscal year 2015? Be specific about direction and amount.
 - c. How, if at all, would CFO, CFI, and CFF on the statement of cash flows be different for fiscal year 2015? Be specific about direction and amount.

Question 3 (20 points): Statement of Cash Flows

Using the balance sheet and additional information that appears below, prepare a statement of cash flows for Watership Company for the year ended December 31, 2016 using the indirect method.

Assets	Dec. 31, 2016	Dec. 31, 2015
Current assets:		
Cash	2,100	4,780
Accounts receivable	3,500	1,000
Inventory	2,350	750
Prepaid rent	70	195
Total current assets	<u>8,020</u>	<u>6,725</u>
Property, Plant, & Equipment		
Land	11,000	12,500
Buildings	25,000	25,000
Less: Accumulated depreciation	(15,000)	(14,000)
Equipment	37,250	30,850
Less: Accumulated depreciation	(22,500)	(18,400)
Total PP&E, net	<u>35,750</u>	<u>35,950</u>
Total assets	<u><u>\$43,770</u></u>	<u><u>\$42,675</u></u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	4,110	3,900
Income taxes payable	2,100	1,390
Deferred revenue	850	1,675
Other accrued expenses	1,700	3,060
Total current liabilities	<u>8,760</u>	<u>10,025</u>
Long-term liabilities:		
Note payable	11,000	12,500
Stockholders' equity:		
Common stock	17,500	15,000
Retained earnings	6,510	5,150
Total stockholders' equity	<u>24,010</u>	<u>20,150</u>
Total liabilities and stockholders' equity	<u><u>\$43,770</u></u>	<u><u>\$42,675</u></u>

Additional information:

1. Net Income for the year was \$2,100.
2. No buildings were bought or sold during the year.
3. A piece of land was sold with a gain of \$200. The firm did not buy any land during the year.
4. On the last day of 2016, the firm issued a note payable to purchase equipment (i.e., no cash is exchanged for the new equipment). No equipment was sold or disposed during the year.
5. No stocks were repurchased during the year.

