

Solutions Chapter 1

Exercise 1.1

Income Statement

Item	Calculations	Outcome (\$)
Sales	$3,000 * \$8$	24,000
Cost of Sales	$3,000 * \$5$	(15,000)
Rent		(2,000)
Depreciation	$\$6,000 / (5 * 12)$	(100)
Profit		6,900

Cash Flow Statement

Item	Calculations	Outcome (\$)
<i>Receipts</i>		
Receivables January		16,000
Sales February	$0.30 * \$24,000$	7,200
<i>Payments</i>		
Purchase bottles	$0.60 * \$20,000$	(12,000)
Payables January		(17,500)
Payment Car		(6,000)
Change in cash position		(12,300)

Final Balance Sheet

Item	Calculations	Outcome (\$)
Car	$\$6,000 - \100	5,900
Inventory	$\$22,500 - 3,000 * \$5 + 4,000 * \$5$	27,500
Receivables	$\$24,000 * 0.7$	16,800
Cash	$\$14,000 - \$12,300$	1,700
Total Assets		51,900
Equity	$\$35,000 + \$6,900$	41,900
Trade Payables	$4,000 * \$5 * 0.4$	8,000
Rent Payable		2,000
Total Sources		51,900

Exercise 1.2

a.

Income Statement

Item	Calculations	Outcome (\$)
Sales	$600 * \$25$	15,000
Cost of sales	$600 * \$20$	(12,000)
Salary	$\$1,300 + \200	(1,500)
Profit		1,500

b.

Cash Flow Statement

Item	Calculations	Outcome (\$)
Cash Sales		5,000
Receipt from client		6,000
Payment to supplier		(7,000)
Salary payment		(1,300)
Increase cash		2,700

c.

Balance Sheet (\$)

Item	Calculations	(\$)
Inventory	$\$15,000 - (600 * \$20) + (500 * \$20)$	13,000
Receivables	$\$7,800 + (\$15,000 - \$5,000) - \$6,000$	11,800
Cash	$\$1,200 + \$2,700$	3,900
Total Assets		28,700
Equity	$\$16,000 + \$1,500$	17,500
Payables	$\$8,000 + (500 * \$20) - \$7,000$	11,000
Salary payable		200
Total Sources		28,700

Exercise 1.3

a.

Income Statement

Item	Calculations	Outcome (€)
Sales	$4,000 * \text{€}3$	12,000
Cost of sales	$4,000 * \text{€}2$	(8,000)
Depreciation		(400)
Rent		(5,700)
Profit (Loss)		(2,100)

b.

Cash Flow Statement

Item	Calculations	Outcome (€)
Receipt from client		€5,000
Payment purchase	$\$7,000 * 0.6$	(4,200)
Payment to supplier		(4,000)
Decrease bank		(3,200)

c.

Balance Sheet

Item	Calculations	Outcome (€)
Car	€9,700 – €400	9,300
Inventory	€12,000 – €8,000 + €7,000	11,000
Receivables	€5,600 + €12,000 – €5,000	12,600
Bank	€4,900 – €3,200	1,700
Total Assets		34,600
Equity	€21,900 – €2,100	19,800
Payables	€10,300 + (0.4*€7,000) – €4,000	9,100
Rent payable		5,700
Total Sources		34,600

Exercise 1.4

a. Inventory must increase from \$30,000 to \$105,000 (+\$75,000).

Cash Flow Statement (\$1,000)

Sales receipts	\$1,500*10/12	1,250
Receivables begin		200
Purchases	(\$1,125+\$75)*10/12	(1,000)
Trade Payables begin		(148)
Other expenses	\$240*11/12 + \$9.6	(229.6)
Redemption		(10)
Interest	\$190*8%*1/2 + \$180*8%*1/2	(14.8)
Computer		(6)
Cash increase		41.6

b.

Balance Sheet (\$1,000)

Building	480 - 24	456
Equipment	150 – 10 + 6	146
Inventory		105
Receivables	1,500*2/12	250
Cash	15 + 41.6	56.6
Total Assets		1,013.6
Equity	527.4 + 86.2	613.6
Loan	190 - 10	180
Trade payable	1,200*2/12	200
Expenses payable	240*1/12	20
Total Sources		1,013.6

Exercise 1.5

a.

Income Statement (\$1,000)

Sales	\$1,300*1.2	1,560
Cost of sales	\$1,560*0.75	(1,170)
Over head		(230)
Selling expenses		(90)
Profit before Tax		70

Tax	$\$70 \times 0.3$	(21)
Profit after Tax		49

Inventory must increase $20\% \times \$260,000 = \$52,000$. So purchases must exceed cost of sales by \$52,000.

b.

Cash Flow Statement Whole Year (\$1,000)

Sales receipts	$\$1,560 \times 40/52$	1,200
Receivables begin		250
Purchases	$(\$1,170 + \$52) \times 44/52$	(1,034)
Payables begin		(300)
Overhead	$\$230 - \$15 - \$35$	(180)
Selling	$\$90 - \12	(78)
Tax payable		(96)
Profit distribution	$\$49 \times 0.40$	(19.6)
Investment		(50)
Decrease bank		(307.6)

Cash Flow Statement per Quarter (\$1,000)

	1	2	3	4
Sales	30	390	390	390
Receivables	250			
Purchases	(117.5)	(305.5)	(305.5)	(305.5)
Payable begin	(300)			
Overhead	(45)	(45)	(45)	(45)
Selling exp	(19.5)	(19.5)	(19.5)	(19.5)
Investment	(50)			
Tax		(96)		
Profit distr.				(19.6)
Net cash flow	(252)	(76)	20	0.4
Bank begin	56	(196)	(272)	(252)
Bank ending	(196)	(272)	(252)	(251.6)

c.

Balance Sheet (\$1,000)

Premises & Fixtures	\$580 - \$50	530
Showroom	\$50 - \$12	38
Inventory	\$260*1.2	312
Receivables	\$1,560*12/52	360
Total Assets		1,240
Equity	\$750 + \$49*0.6	779.4
Trade payable	\$1,222*8/52	188
Tax payable		21
Bank	\$56 - \$307.6	251.6
Total Sources		1,240

d. The expansion results in increased profits. The old sales level generates a pretax profit of (\$1,000): $1,300*0.25 - 230 - 78 = 17$. They have a cash flow problem however. They may ask the bank to allow an overdraft, but other measures can be taken too. The showroom can be financed by attracting a loan. Echo could consider reducing the credit terms of sales, thus receiving cash more quickly. At the same time, they can negotiate longer credit terms or lower prices for their own supplies since they buy larger quantities.

Exercise 1.6

a.

Balance Sheet January 1 (\$)

Finished product	1,800*16	28,800
Materials	4,580*4	18,320
Receivables		24,000
Bank		5,000
Total Assets		76,120
Equity	76,120 - 11,000	65,120
Payables		11,000
Total Sources		76,120

b.

Production: $900 + 980*12 - 1,800 = 10,860$ units. $10,860/12 = 905$ per month.

c.

Purchases: $2,000*4 + 12*905*12 - 4,580*4 = \$120,000 = \$10,000$ per month.

d.

Income Statement (\$)

Sales	980*12*\$20	235,200
Cost of sales	980*12*\$16	(188,160)
Profit		47,040

e.

Cash Flow Statement (\$)

Sales receipts	\$235,200*10.5/12	205,800
Receivables begin		24,000
Purchases	\$120,000*10.5/12	(105,000)

Payables begin		(11,000)
Labor (16-12 = 4 per unit)	10,860*\$4	(43,440)
Increase bank		70,360

f.

Balance Sheet December 31 (\$)

Finished product	900*\$16	14,400
Materials	2,000*\$4	8,000
Receivables	\$235,200*1.5/12	29,400
Bank	\$5,000 + \$70,360	75,360
Total Assets		127,160
Equity	\$65,120 + \$47,040	112,160
Payables	\$120,000*1.5/12	15,000
Total Sources		127,160