

ADM 2342
MID TERM EXAM
Intermediate Financial Accounting 1
Spring/Summer 2012

SOLUTIONS

Instructions:

1. This examination comprises 5 questions over 15 pages. The second last page (page 14) contains present value tables. The last page (page 15) is an extra page for rough work and any additional supporting calculations. Answer all questions directly in this booklet. The booklet is not to be removed from the examination room. You may separate the pages but ensure that you put them back together and staple them before handing in.
2. Limit your answer to the space provided. Blank sheets for rough work and supporting calculations are given at the end of each question. You must show, where appropriate, supporting calculations.
3. This exam is out of 80 marks and is 2½ hours long. You should budget approximately 1.8 minutes per mark.
4. Please do **not** ask the invigilator or the professor any questions, as they will **not** be answered. State reasonable assumptions, if you feel they are necessary.
5. Language dictionaries (non-electronic) are allowed if the invigilator permits them. They must be shown to the invigilator before the start of the exam.
6. The use of electronic communication devices such as cell phones is strictly prohibited during the exam.
7. You **must** sign the Statement of Academic integrity on page 2 of this exam.

Question		Marks
1	Income & Comprehensive Income	/24
2	Cash Flow Statement	/16
3	Statement of Retained Earnings	/10
4	Revenue Recognition	/19
5	Cash and Receivables	/11
TOTAL		<u>/80</u>

Statement of Academic Integrity

The Telfer School of Management does not condone academic fraud, an act by a student that may result in a false academic evaluation of that student or of another student. Without limiting the generality of this definition, academic fraud occurs when a student commits any of the following offences: plagiarism or cheating of any kind, use of books, notes, mathematical tables, dictionaries or other study aid unless an explicit written note to the contrary appears on the exam, to have in his/her possession cameras, radios (radios with head sets), tape recorders, pagers, cell phones, or any other communication device which has not been previously authorized in writing.

Statement to be signed by the student:

I have read the text on academic integrity and I pledge not to have committed or attempted to commit academic fraud in this examination.

Signed: _____

Note: an examination copy or booklet without that signed statement will not be graded and will receive a final exam grade of zero.

Question No. 1 (24 marks)

Middleton Corporation is a public company based in Nova Scotia and follows IFRS. Its accounting period ends December 31. For 2011, the company's accounting records show the following items:

- i. A \$400,000 loss from hurricane damage. Hurricanes are very rare in Nova Scotia.
- ii. Total sales revenue of \$2,600,000 which includes \$400,000 in the Chester Division. The Chester Division is in the process of being sold off with sale date set for March 31, 2012.
- iii. Interest expense on long-term debt of \$65,000.
- iv. Gain on sale of marketable securities of \$55,000.
- v. Operating expenses of \$2,100,000 which included \$390,000 in expenses incurred by the Chester Division. Included in the \$2,100,000 of operating expenses was \$500,000 depreciation expense of which \$75,000 pertained to the Chester Division.
- vi. During 2011, Middleton recorded an impairment loss in the amount of \$35,000. This loss related to the assets of the Chester Division that were written down from a carrying value of \$75,000 to a recoverable (fair market) value after selling expenses of \$40,000.
- vii. An actuarial loss (after-tax) on its defined benefit pension plan in the amount of \$28,000.
- viii. Middleton has a foreign subsidiary located in France. Because the euro strengthened during the year, Middleton had an unrealized after-tax gain of \$90,000 on its net investment in this subsidiary.
- ix. Middleton has 200,000 common shares outstanding throughout 2011.
- x. Middleton has a tax rate of 30% on all items.

Required:

- (a) Where on Middleton's 2011 Balance Sheet should the assets of the Chester Division be reported and how should they be classified? (2 marks)
- (b) Users of Middleton's Income Statement and Statement of Comprehensive Income need "good information" in order to make certain decisions. What two aspects must be considered when assessing any company's quality of earnings? (2 marks)
- (c) Using intraperiod tax allocation, prepare in single-step format and with all required disclosures a combined Income and Comprehensive Income Statement for Middleton Corporation for the year ended 2011. (20 marks)

Question No. 1 (continued) (24 marks)

Answer:

- (a) Assets of the Chester Division will be classified as “held-for-sale” assets and, under IFRS, reported under current assets.
- (b) To assess any company’s quality of earnings, one must consider both the content of what is being reported (integrity of information/sustainability of earnings) and the presentation or the way it is reported (clear, unbiased and understandable)

(c) **Middleton Corporation**
Combined Income and Comprehensive Income Statement
For the year ended December 31, 2011

<i>Revenues and Gains:</i>		
Sales revenue	\$2,200,000	
Gain on sale of marketable securities	<u>55,000</u>	\$2,255,000
<i>Expenses and Losses:</i>		
Operating expenses*	1,285,000	
Depreciation expense (\$500,000 – \$75,000)	425,000	
Interest expense	65,000	
Loss from hurricane damage	<u>400,000</u>	<u>2,175,000</u>
Income from continuing operations before income tax		80,000
Income tax expense (30%)		<u>24,000</u>
Income from continuing operations		56,000
<i>Discontinued operations:</i>		
Income from operations of Chester Division (net of tax expense of \$3,000)**	7,000	
Loss on impairment of capital assets of Chester Division (net of tax recovery of \$10,500)	<u>(24,500)</u>	
Net loss on discontinued operations		<u>(17,500)</u>
Net income		38,500
<i>Other comprehensive income:</i>		
Actuarial loss on defined benefit pension plan (net of income tax recovery of \$12,000)	(28,000)	
Unrealized gain in net investment in foreign subsidiary (net of income tax expense of \$38,571)	<u>90,000</u>	<u>62,000</u>
Comprehensive income		\$ <u>100,500</u>

EPS (based upon 200,000 common shares outstanding)

Income from continuing operations	\$ 0.28	\$56,000 ÷ 200,000
Loss per share on discontinued operations	<u>(0.0875)</u>	(\$17,500) ÷ 200,000
Earnings per share	<u>\$ 0.1925</u>	\$38,500 ÷ 200,000

* The segregation of Chester Division’s operating expenses, between continuing and discontinued operations and the analysis of depreciation expense are as follows:

	Total	Discontinued Operations	Continuing Operations
Total operating expenses	\$ 2,100,000	\$ 390,000	\$ 1,710,000
Depreciation expense	<u>500,000</u>	<u>75,000</u>	<u>425,000</u>
Operating expense (excluding depreciation)	<u>\$ 1,600,000</u>	<u>\$ 315,000</u>	<u>\$ 1,285,000</u>

** Income from Operations of the Chester Division = \$400,000 – \$390,000 = \$10,000. Tax expense at 30% is \$3,000. After-tax income, therefore, is \$7,000.

Question No. 2 (16 marks)

Jacob Corporation is a private company and follows ASPE. The most recent comparative Balance Sheet (condensed) and Income Statement of Jacob Corporation follow:

**Jacob Corporation
Comparative Balance Sheet
As at December 31, 2011**

	2011	2010
Assets:		
Cash	29,500	30,000
Accounts receivable	17,000	12,000
Capital assets	138,500	123,500
Accumulated depreciation	<u>(89,000)</u>	<u>(83,500)</u>
Total assets	<u>\$ 96,000</u>	<u>\$ 82,000</u>
Liabilities and shareholders' equity		
Bonds payable	\$ 24,500	\$ 23,000
Dividends payable	4,000	2,500
Contributed capital - Common shares	11,000	9,500
Contributed surplus	4,500	1,500
Retained earnings	<u>52,000</u>	<u>45,500</u>
Total liabilities and shareholders' equity	<u>\$ 96,000</u>	<u>\$ 82,000</u>

**Jacob Corporation
Income Statement
For the year ending December 31, 2011**

Sales revenue	\$ 77,500
Cost of goods sold	(53,500)
Gross margin	24,000
Depreciation expense	(16,500)
Gain on sale of equipment	<u>6,500</u>
Net income	<u>\$ 14,000</u>

Additional information:

1. During 2011, equipment costing \$20,000 was sold for cash.
2. During 2011, \$10,000 bonds payable were issued in exchange for capital assets.
There was no amortization of any bond discount or premium.

Required:

Prepare with appropriate headings and disclosures the 2011 Cash Flow Statement for Jacob Corporation using the indirect method.

Question No. 2 (continued) (16 marks)

Answer:

Jacob Corporation
Cash Flow Statement
For the year ending December 31, 2011

Operating activities		
Net income	\$14,000	
Depreciation expense	16,500	
Accounts receivable increase	(5,000)	
Gain on sale of equipment	<u>(6,500)</u>	
Net operating cash inflow		\$19,000
Investing activities		
Proceeds from sale of equipment	\$15,500	
Purchase of equipment	<u>(25,000)</u>	
Net investing cash outflow		(9,500)
Financing activities		
Retirement of bonds	\$(8,500)	
Dividends paid	(6,000)	
Issuance of common shares	<u>4,500</u>	
Net financing cash outflow		<u>(10,000)</u>
Net decrease in cash		(500)
Cash at beginning of year		<u>30,000</u>
Cash at end of year		<u>\$29,500</u>

Note:

Acquisition of plant assets through bond issuance \$10,000

Question No. 3 (10 marks)

At the end of 2010, the accounts of Yamamoto Corporation, a privately held corporation, reported a balance of \$48,000 in its retained earnings account.

The following additional items are noted:

- (a) During 2011, the federal government appropriated some land that was owned by Yamamoto. Yamamoto has decided to report this item as an extraordinary item. The after-tax amount of the gain was \$15,400 and the related tax expense was \$6,600.
- (b) On November 15, 2011, Yamamoto declared a cash dividend of \$0.07 per share on its common shares, payable on January 15, 2012. The number of common shares issued and outstanding on January 1, 2011 was 150,000. There has been no change in the common share account during the year.
- (c) For the year ended December 31, 2011, Yamamoto reported operating income before taxes and extraordinary items in the amount of \$80,000.
- (d) During 2011, the accountant for Yamamoto discovered an error that related to a previous year. The impact of the error resulted in an overstatement of 2009 net income in the amount of \$12,600 net of income tax savings of \$5,400.
- (e) Yamamoto's tax rate has remained the same for the last three years. The same tax rate is used on all items.

Required:

Prepare a properly formatted Statement of Retained Earnings for Yamamoto Corporation for the year ended December 31, 2011. Yamamoto follows ASPE.

Answer:

<i>Yamamoto Corporation</i>	
<i>Statement of Retained Earnings</i>	
<i>For the year ended December 31, 2011</i>	
<i>Retained earnings, January 1, 2011, as originally stated</i>	\$ 48,000
<i>Less: correction of error (net of income tax saving of \$5,400)*</i>	<u>(12,600)</u>
<i>Retained earnings, January 1, 2011 restated</i>	35,400
<i>Add: Net income for 2011</i>	71,400
<i>Less: dividends declared</i>	<u>(10,500)</u>
<i>Retained earnings, 31 December 20X2</i>	<u>\$ 96,300</u>

- * *The adjustment to the beginning balance of retained earnings was as a result of the correction of an error which overstated 2009 net income by \$18,000 less tax savings of \$5,400.*

Supporting calculations:

$$\text{Income tax rate: } (\$6,600) / (\$15,400 + \$6,600) = \underline{30\%}$$

$$\text{Net income } (\$80,000 \times .7) + \$15,400 \text{ EI gain} = \underline{\underline{\$71,400}}$$

Question No. 4 (19 marks)

The Mic Mac Construction Corporation specializes in the building of athletic stadiums. Recently, Mic Mac contracted with the Government of Kuhl to construct a state-of-the-art athletic facility over a three year period in the capital city of Coblentz for a total contract price of \$12,000,000. Mic Mac uses the earnings approach to revenue recognition.

Annualized information relating to this contract is summarized below:

	2009	2010	2011
Costs incurred <u>each year</u>	2,530,000	5,870,000	3,150,000
Estimated costs to complete at year-end	8,470,000	2,800,000	0
<u>Annual</u> Billings to Coblentz	4,000,000	4,000,000	4,000,000
<u>Annual</u> Collections on Billings	1,000,000	5,000,000	6,000,000

Required: (consider each part independently)

- (a) Assume Mic Mac follows ASPE. Complete the following table to show the amount of gross profit or loss recognized each year under both the percentage of completion (POC) method and the completed contract (CC) method. In each case, show clearly whether your answer is a profit or loss. Show supporting calculations beneath your table (6 marks)

	POC	CC
2009		
2010		
2011		

- (b) Assume that Mic Mac follows IFRS and uses the POC method. Prepare journal entries for the year 2010 only to record:
- costs of construction;
 - billings;
 - cash collections;
 - recognition of gross profit/(loss); and
 - construction costs and associated construction revenue. (5 marks)
- (c) Assume again that Mic Mac follows IFRS and uses the POC method. Prepare a partial 2010 Balance Sheet and Income Statement for Mic Mac Construction Corporation. Your Balance Sheet must show relevant balances involving accounts receivable and inventory. Your Income Statement must show the derivation of the gross profit for 2010. (8 marks)

Answer:

(a)

	POC	CC
2009	\$230,000	\$0
2010	\$370,000	\$0
2011	(\$150,000)	\$450,000

Question No. 4 (continued) (19 marks)

(a) Percentage of Completion Method

2009:

$$\frac{2,530,000}{11,000,000} \times (12,000,000 - 11,000,000) = \underline{\underline{\$230,000}}$$

2010:

$$\frac{8,400,000}{11,200,000} \times (12,000,000 - 11,200,000) - 230,000 = \underline{\underline{\$370,000}}$$

2011:

$$\frac{11,550,000}{11,550,000} \times (12,000,000 - 11,550,000) - 230,000 - 370,000 = (\underline{\underline{\$150,000}})$$

Completed Contract Method

2009: \$ 0

2010: \$ 0

2011: \$ 450,000

(b)	Construction in Process Inventory	5,870,000	
	Accounts Payable/ Cash (etc)		5,870,000
	(to recognize 2010 costs of construction)		
	Accounts Receivable	4,000,000	
	Billings on Contract		4,000,000
	(to recognize 2010 progress billings)		
	Cash	5,000,000	
	Accounts Receivable		5,000,000
	(to recognize 2010 cash collections)		
	Construction in Process Inventory	370,000	
	Revenue from L/T Contract		370,000
	(to recognize 2010 GP)		
	Costs of Construction	5,870,000	
	Revenue from L/T Contract		5,870,000
	(To recognize 2010 construction costs and revenues)		

(c) **Mic Mac Construction Corporation**
(Partial) Balance Sheet
December 31, 2010
 Assets

Current Assets

Accounts Receivable		\$ 2,000,000
Inventory		
Construction-in-process Inventory	9,000,000*	
Less: Billings on Contracts	<u>8,000,000*</u>	
Construction-in-process in excess of billings		<u>\$ 1,000,000</u>

Construction-in-Process*		Billings on Contracts*	
2,530,000		4,000,000	
5,870,000		<u>4,000,000</u>	
230,000		8,000,000	
<u>370,000</u>			
9,000,000			

Question No. 4 (continued) (19 marks)

**Mic Mac Construction Corporation
(Partial) Income Statement
For the period ending December 31, 2010**

<i>Revenues from Long Term Contract</i>	<i>\$ 6,240,000*</i>
<i>Costs of Construction</i>	<u><i>5,870,000</i></u>
<i>Gross Profit</i>	<u><i>\$ 370,000</i></u>
* <i>2010 revenue = (75% x \$12,000,000) – (23% x \$12,000,000) = \$6,240,000</i>	

Question No. 5 (11 marks)

Required:

Answer the following three unrelated questions relating to receivables.

- (a) Both ASPE and IFRS support measuring financial assets at the present value of cash expected to be received. Explain why net realizable value is allowed to be used to approximate present value of cash to be received in the case of a short-term trade receivable. (2 marks)
- (b) Dundee United performed landscaping services for Celtic Ltd. on December 31, 2010 and in return accepted a \$16,000 non-interest bearing note due December 31, 2014. Celtic Ltd. typically borrows funds at 9%. If Dundee’s year-end is December 31, prepare the journal entry required on December 31, 2012 assuming Dundee follows IFRS. (4 marks)
- (c) On January 1, 2009, Moran Corporation made a loan to Becker Company and received in exchange a \$12,000 four-year note bearing interest at 8%. The market rate of interest for a note of similar risk is 6%. Assuming Moran follows IFRS, what would the carrying value of the note be on December 31, 2011? (5 marks)

Answer:

(a) *Net realizable value is approximated to present value in the valuation of short-term receivables because the effect of the time value of money (within one year) is immaterial.*

(b) *PV of 4-year, non-interest bearing \$16,000 note receivable:*
PV of \$16,000 due in 4 years at 9% = \$16,000 / (1.09)⁴
= \$16,000 / 1.41158 = \$11,334.80
2011 Interest revenue = \$11,334.80 x .09 = \$1,020.13
2012 interest revenue = (\$11,334.80 + 1,020.13) x .09 = \$1,111.94

December 31, 2012

<i>Note receivable.....</i>	<i>1,111.94</i>	
<i>Interest revenue.....</i>		<i>1,111.94</i>

(c) *PV of \$12,000 due in 4 years at 6% = \$12,000 / (1.06)⁴ + PVOA \$960_{n=4; i=6%}*
= \$12,000 / 1.262477 + \$960 (3.465106)
= \$9,505.12 + \$3,326.50 = \$12,831.62

CV of N/R as at December 31, 2011 is \$12,226 (see amortization schedule below)

<u>Date</u>	<u>Cash Received</u>	<u>Interest Income</u>	<u>Premium Amortization</u>	<u>Carrying Value of N/R</u>
<i>01/01/09</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>\$12,831</i>
<i>12/31/09</i>	<i>\$960</i>	<i>\$770</i>	<i>\$190</i>	<i>12,641</i>
<i>12/31/10</i>	<i>960</i>	<i>759</i>	<i>201</i>	<i>12,440</i>
<i>12/31/11</i>	<i>960</i>	<i>746</i>	<i>214</i>	<i>12,226</i>
<i>12/31/12</i>	<i>960</i>	<i>734</i>	<i>226</i>	<i>12,000</i>

Financial Tables Present Value Tables

Table 2: PRESENT VALUE of \$1.00 that is received in the future.

Period/ Percent	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%
1	0.9900990	0.9803922	0.9708738	0.9615385	0.9523810	0.9433962	0.9345794	0.9259259	0.9174312	0.9090909	0.9009090	0.8928571	0.8849558	0.8771930	0.8695652	0.8620690	0.8547009	0.8474576
2	0.9802960	0.9611698	0.9425959	0.9245562	0.9070295	0.8899964	0.8734357	0.8573398	0.8416900	0.8264463	0.8116224	0.7971939	0.7831467	0.7694675	0.7561437	0.7431629	0.7305136	0.7181844
3	0.9705901	0.9423223	0.9151447	0.8889964	0.8638376	0.8396193	0.8162979	0.7938322	0.7721853	0.7513148	0.7311914	0.7117802	0.6930502	0.6749715	0.6575162	0.6406577	0.6243706	0.6086309
4	0.9609803	0.9238454	0.8884870	0.8548042	0.8227025	0.7920937	0.7628952	0.7350299	0.7084252	0.6830135	0.6587310	0.6355181	0.6133187	0.5920803	0.5717532	0.5522911	0.5336500	0.5157899
5	0.9514637	0.9057308	0.8626088	0.8219271	0.7835262	0.7472582	0.7129962	0.6808532	0.6499314	0.6202913	0.5934513	0.5674269	0.5427599	0.5193687	0.4971767	0.4761130	0.4561112	0.4371092
6	0.9420452	0.8879714	0.8374843	0.7903145	0.7462154	0.7049605	0.6663422	0.6301696	0.5962673	0.5644739	0.5346408	0.5066311	0.4803183	0.4553865	0.4323276	0.4104423	0.3898366	0.3704315
7	0.9327181	0.8705602	0.8130915	0.7599178	0.7106813	0.6650371	0.6227497	0.5834904	0.5470342	0.5131581	0.4816384	0.4523492	0.4250606	0.3996373	0.3759370	0.3538295	0.3331954	0.3139250
8	0.9234832	0.8534904	0.7894092	0.7306902	0.6768394	0.6274124	0.5820091	0.5402689	0.5015663	0.4665074	0.4339263	0.4038832	0.3761599	0.3505591	0.3269018	0.3050255	0.2847824	0.2660382
9	0.9143398	0.8367533	0.7664167	0.7025867	0.6446089	0.5918985	0.5439337	0.5002490	0.4604278	0.4240976	0.3909248	0.3606100	0.3328848	0.3075079	0.2842624	0.2629530	0.2434037	0.2254561
10	0.9052870	0.8203485	0.7440939	0.6755642	0.6139133	0.5583948	0.5083493	0.4631935	0.4224108	0.3855433	0.3521845	0.3219732	0.2943883	0.2697438	0.2471847	0.2266836	0.2080874	0.1910645
11	0.8963237	0.8042630	0.7224213	0.6495809	0.5846793	0.5267875	0.4750928	0.4288829	0.3873329	0.3504939	0.3172833	0.2874761	0.2606977	0.2366174	0.2149432	0.1954169	0.1778097	0.1619190
12	0.8874492	0.7884932	0.7013799	0.6245970	0.5568374	0.4969694	0.4440120	0.3971138	0.3553347	0.3186308	0.2858408	0.2566751	0.2307059	0.2075591	0.1869072	0.1684628	0.1519741	0.1372195
13	0.8786626	0.7730325	0.6809513	0.6005741	0.5303214	0.4688590	0.4149644	0.3676979	0.3261796	0.2896644	0.2575143	0.2291742	0.2041645	0.1820694	0.1625280	0.1452266	0.1298924	0.1162877
14	0.8699630	0.7578750	0.6611178	0.5774751	0.5050680	0.4423010	0.3878172	0.3404610	0.2992463	0.2633313	0.2319948	0.2046198	0.1806766	0.1597100	0.1413287	0.1251933	0.1110192	0.0985489
15	0.8613495	0.7430147	0.6415619	0.5552645	0.4810171	0.4172651	0.3624460	0.3152417	0.2745350	0.2393920	0.2090043	0.1826963	0.1598908	0.1400963	0.1229945	0.1079270	0.0945882	0.0835160
16	0.8528213	0.7284438	0.6231669	0.5339082	0.4581115	0.3936463	0.3387346	0.2918905	0.2518698	0.2176291	0.1882922	0.1631217	0.1414962	0.1228917	0.1068648	0.0930405	0.0811010	0.0707763
17	0.8443775	0.7141626	0.6050164	0.5133732	0.4362967	0.3713644	0.3163744	0.2702690	0.2310732	0.1978447	0.1696326	0.1456445	0.1252179	0.1077997	0.0929259	0.0802074	0.0693171	0.0599799
18	0.8360173	0.7001594	0.5873946	0.4956281	0.4153207	0.3503438	0.2958639	0.2502490	0.2119937	0.1798588	0.1529222	0.1300396	0.1109123	0.0945611	0.0808051	0.0691443	0.0592454	0.0508504
19	0.8277399	0.6864308	0.5702860	0.4746424	0.3957340	0.3305150	0.2763083	0.2317121	0.1944897	0.1635080	0.1376776	0.1161068	0.0980640	0.0829484	0.0702653	0.0596071	0.0506371	0.0430766
20	0.8195445	0.6729715	0.5536758	0.4563869	0.3768995	0.3118047	0.2584190	0.2145482	0.1784309	0.1486436	0.1240339	0.1036668	0.0867823	0.0727617	0.0611003	0.0513555	0.0432796	0.0365056
21	0.8114302	0.6597758	0.5375943	0.4388336	0.3589424	0.2941534	0.2413131	0.1986357	0.1636981	0.1331306	0.1117423	0.0925596	0.0767985	0.0638261	0.0531307	0.0442978	0.0369911	0.0309370
22	0.8033962	0.6468390	0.5218925	0.4219354	0.3418499	0.2775051	0.2257132	0.1839405	0.1501817	0.1228460	0.1006687	0.0826425	0.0679633	0.0559878	0.0462006	0.0381878	0.0316163	0.0262178
23	0.7954418	0.6341559	0.5066917	0.4057263	0.3255713	0.2617973	0.2109469	0.1703153	0.1377814	0.1116782	0.0906925	0.0737880	0.0601445	0.0491121	0.0401744	0.0329205	0.0270225	0.0222185
24	0.7875661	0.6217215	0.4919337	0.3901215	0.3100679	0.2469785	0.1971466	0.1576993	0.1264049	0.1015236	0.0817050	0.0658821	0.0532252	0.0430808	0.0349343	0.0283797	0.0230961	0.0188292
25	0.7797684	0.6093309	0.4776056	0.3751168	0.2953028	0.2329986	0.1842492	0.1460179	0.1139678	0.0922260	0.0736081	0.0588233	0.0471020	0.0377902	0.0303776	0.0244633	0.0197403	0.0159369
26	0.7720480	0.5975793	0.4636947	0.3606892	0.2812407	0.2198100	0.1721955	0.1352018	0.1063923	0.0839055	0.0666316	0.0525208	0.0416831	0.0331493	0.0264453	0.0210908	0.0168720	0.0135228
27	0.7644039	0.5858620	0.4501891	0.3468166	0.2678483	0.2073680	0.1609304	0.1251868	0.0976078	0.0762777	0.0597420	0.0468936	0.0368877	0.0290783	0.0229699	0.0181817	0.0144205	0.0114600
28	0.7568336	0.5743746	0.4370768	0.3334775	0.2550936	0.1956301	0.1504022	0.1159137	0.0893484	0.0693433	0.0538216	0.0418695	0.0326440	0.0255073	0.0199738	0.0156739	0.0123253	0.0097119
29	0.7493421	0.5631123	0.4243464	0.3206314	0.2429463	0.1845367	0.1405628	0.1073275	0.0821545	0.0630394	0.0484979	0.0373833	0.0288885	0.0223748	0.0173685	0.0135120	0.0103544	0.0082304
30	0.7419229	0.5520709	0.4119868	0.3083187	0.2313774	0.1741101	0.1313671	0.0993773	0.0753711	0.0573086	0.0436828	0.0333779	0.0253651	0.0196270	0.0151031	0.0116482	0.0090038	0.0069749

Table 4: PRESENT VALUE of Annuity of \$1.00 in arrears.

Period/ Percent	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%
1	0.990099	0.980392	0.970874	0.961538	0.952381	0.943396	0.934579	0.925926	0.917431	0.909091	0.900901	0.892857	0.884956	0.877193	0.869565	0.862069	0.854701	0.847458
2	1.970395	1.941561	1.913470	1.886095	1.859410	1.833393	1.808019	1.783265	1.759111	1.735537	1.712523	1.690051	1.668102	1.646661	1.625709	1.605232	1.585214	1.565642
3	2.940953	2.883883	2.828611	2.775091	2.723248	2.673012	2.624316	2.577097	2.531293	2.486882	2.443715	2.401831	2.361133	2.321632	2.283225	2.245890	2.209585	2.174273
4	3.901966	3.807729	3.717098	3.629895	3.545951	3.465106	3.387211	3.312127	3.239720	3.169865	3.102446	3.037349	2.974471	2.913712	2.854978	2.798181	2.743253	2.690062
5	4.853431	4.707729	4.579707	4.451822	4.329477	4.212364	4.100197	3.992710	3.889651	3.790787	3.695897	3.604776	3.517231	3.433081	3.352155	3.274294	3.199346	3.127171
6	5.795476	5.609370	5.417191	5.242137	5.075692	4.917324	4.766540	4.622880	4.485919	4.355261	4.230358	4.111407	3.997550	3.888668	3.784483	3.684736	3.589185	3.497603
7	6.728195	6.506260	6.290283	6.080255	5.876373	5.678281	5.486579	5.299929	5.120630	4.948419	4.782196	4.621962	4.466704	4.316305	4.170420	4.029565	3.893230	3.765918
8	7.651678	7.411973	7.196922	6.987245	6.783213	6.584321	6.390199	6.201399	6.017493	5.838063	5.663704	5.494926	5.331231	5.173211	5.020472	4.873418	4.731544	4.594352
9	8.566018	8.272630	7.996109	7.735332	7.489822	7.259073	7.042748	6.840388	6.651523	6.475625	6.312804	6.161617	6.021565	5.892161	5.772911	5.663418	5.563227	5.471918
10	9.471385	9.130654	8.802023	8.485823	8.181596	7.888873	7.607173	7.335929	7.074688	6.822863	6.580004	6.346681	6.122465	5.907004	5.700004	5.501004	5.309504	5.125004
11	10.367628	9.981117	9.607624	9.246477	8.897044	8.558873	8.231596	7.914688	7.607688	7.309929	7.020929	6.740196	6.467004	6.201004	5.941804	5.688804	5.441504	5.199504
12	11.255077	10.826910	10.409404	9.992874	9.586823	9.191688	8.807493	8.433793	8.070063	7.715863	7.370763	7.034363	6.706163	6.386763	6.074763	5.768763	5.468263	5.172763
13	12.133740	11.654263	11.234955	10.825809	10.427248	10.038748	9.659848	9.290048	8.929848	8.577848	8.233248	7.896648	7.567648	7.245848	6.930048	6.624048	6.327248	6.039248
14	13.003703	12.470318	11.996073	11.531223	11.076173	10.630323	10.193173	9.764223	9.342073	8.926223	8.516273	8.111923	7.713673	7.321023	6.934473	6.553423	6.177273	5.805523
15	13.863053	13.273533	12.738933	12.218583	11.711833	11.213183	10.721033	10.235883	9.756233	9.281683	8.812133	8.347583	7.887033	7.440483	7.007433	6.587383	6.179833	5.784283
16	14.717874	14.071979	13.471102	12.924952	12.392802	11.874152	11.368502	10.874352	10.390202	9.915652	9.450202	8.993652	8.545602	8.105452				