

**Mid Term Exam (2.5 hours)**  
**Intermediate Financial Accounting I**  
**Winter 2015**  
**ADM2342**

**(SUGGESTED SOLUTIONS)**

**Name:** \_\_\_\_\_

**ID#:** \_\_\_\_\_

**Instructions:**

- Write your name and student ID number above. Display your student ID on your desk during the exam.
- Turn off all cell phones.
- This examination “**SUGGESTED SOLUTION**” comprises **6** questions over **21** numbered pages.
- Answer all questions in this booklet.
- The booklet is **not** to be removed from the examination room. You may not separate the pages.
- Do not answer questions using a pencil or erasable pen: if you do you will forfeit your right to request a review of your exam.
- Limit your answer to the space provided. Blank space for rough work and supporting calculations are given at the end of each question. All supporting calculations **must** be shown.
- This exam will be marked out of 100 marks (for convenience) and is **2.5 hours long**. You should budget approximately 1.8 minutes per mark. The exam is worth **35%** of the overall course mark.
- 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.
- Present value tables are provided on pages **19 and 21**.
- Language (non-electronic) dictionaries are allowed but only after permission has been given by the proctors at the start of the examination.
- You **must** sign the Statement of Academic Integrity on page 2 of this exam.

Question			Marks
<b>Q 1</b>	<b>Chapter 1</b>		<b>/11</b>
<b>Q 2</b>	<b>Chapter 3</b>		<b>/9</b>
<b>Q 3</b>	<b>Chapter 4</b>	<b>Part 1</b>	<b>/4</b>
		<b>Part 2</b>	<b>/14</b>
<b>Q 4</b>	<b>Chapter 5</b>	<b>Part 1</b>	<b>/6</b>
		<b>Part 2</b>	<b>/15</b>
<b>Q 5</b>	<b>Chapter 6</b>	<b>Part 1</b>	<b>/12</b>
		<b>Part 2</b>	<b>/5</b>
<b>Q 6</b>	<b>Chapter 7</b>	<b>Part 1</b>	<b>/12</b>
		<b>Part 2</b>	<b>/12</b>
<b>TOTAL</b>			<b>/100</b>

Section	X
Section M: (Professor Conheady, Monday 11:30-1:00pm & Thursday 1:00-2:30pm)	
Section N: (Professor Kerr, Thursday 5:30-8:30pm)	
Section P: (Professor Conheady, Monday 8:30-10:00am & Thursday 10:00-11:30am)	

**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 an exam grade of zero.

**QUESTION 1 (11 marks)**

**Answer ALL parts to this question. Each part is independent.**

- (a) Since 2011 Canada has employed a two-tiered system for determining standards for private versus public companies. Private companies may follow ASPE as prepared by the AcSB, and public companies have to follow IFRS. Private companies are allowed to use IFRS if they choose.

**Required (your writing must be legible in order to be marked)**

Provide two arguments in favour of, and two arguments against, this type of system where there are two sets of accounting standards for Canada’s private and public companies. (2 marks)

Arguments in favour:

1	
2	

Arguments against:

1	
2	

For many years there has been a discussion of whether or not one single set of standards could really meet all the needs of businesses and users. Finally, after years of debate, the AcSB has decided that it is best to have two sets of standards – one for publicly accountable enterprises (PAE’s) and one for non-publicly accountable enterprise (non-PAE’S).

The arguments for having a two-tiered system are as follows: (adapted from: “Private Matters”, by Jeff Buckstein, CA Magazine, May 2009)

1. The users of non-PAE’s financial statements are primarily the owner/managers, the bank and the tax authorities. A large set of users for PAE’s financial statements are external users – potential investors. The needs of these users are very different. A two-tiered system allows the standards to be developed with specific user groups in mind.
2. PAEs that are usually involved in global businesses and will be following global accounting standards. Since most private companies do not do business globally, there is no need for global standards to be used. A made-in Canada solution is better.
3. Historically, GAAP has allowed differential reporting which allowed private companies to follow more simplified standards if the shareholders unanimously agreed. These options have now been incorporated into the ASPE.
4. Some of the standards are not relevant for private companies and these can be eliminated. Sections pertaining to earnings per share and interim reporting, for example are often not relevant for private companies where the company’s shares are closely held.
5. Private companies are usually not involved in complex transactions that require complex accounting standards. In these cases, sections can be simplified to meet the needs specifically for private companies (or example, financial instruments and income taxes). The complexity and disclosure requirements of these sections that is required for PAE’s are not relevant for private companies.
6. Disclosure requirements are significant for PAE’s given that market analysts want a lot of information. But for private companies, the main users are the bank and leasing companies who do not need a lot of this information. Disclosure is costly to prepare. Therefore, with ASPE, the amount of disclosure can be greatly reduced reducing the cost of preparing financial statements.

**QUESTION 1 (11 marks) (continued)**

**Answer ALL parts to this question. Each part is independent.**

- 7. The corporate structure of non-PAE's is also more simple, usually only consisting of one company, or maybe a few. So the complexities of standards related to consolidations are not really required. More simple accounting treatments can be adopted for private companies.
- 8. In many areas of the standards, there will be few changes, so IFRS and ASPE will have many similarities.

Arguments against a two-tiered system:

- (a) Over time, there is a risk that the two systems will really diverge and become very different. This will make it difficult for professionals to learn and know two sets of accounting standards.
- (b) It is costly to have two sets of standards that must be maintained and updated regularly by the standard setting boards.
- (c) CFOs working in private companies may not be able to move easily to public companies, since they will not be familiar with the reporting and disclosure requirements.
- (d) For professionals preparing financial statements – it may also be difficult to move from private companies to public companies.
- (e) What about large private companies that operate similarly to a PAE? Are their needs really different? Many would argue that the needs and reporting requirements are the same. So at what point does a non-PAE move from ASPE to IFRS?
- (f) It might be difficult for a private company to go public or raise capital from other sources given that their historical financial statements will be prepared on a more simplified basis.

(b) Provide the IFRS definition of *fair value*. (2 marks)

“the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” [fair value is a market-based measure, not an entity-based measure].

(c) Your textbook lists ‘three essential characteristics’ of an *asset*. What are they? (3 marks)

1	
2	
3	

1	There is some economic benefit to the entity.
2	The entity has control over the benefit.
3	The benefits result from a past transaction.

(d) Define *expenses*. (2 marks)

Expenses are decreases in economic resources (either by outflows or reductions of assets or by the incurrence of liabilities) that result from the entity's **ordinary revenue-generating activities**.

(e) Define *losses*. (2 marks)

Losses are decreases in equity (net assets) from an entity's peripheral or incidental transactions/activities and from all other transactions and other events and circumstances affecting the entity during a period, except those decreases in equity (net assets) that result from expenses or distributions to owners.

**QUESTION 2 (9 marks)**

The trial balance and the other information for the consulting engineers BlueBell Consulting Limited follow:

<b>BLUEBELL CONSULTING LIMITED</b>		
<b>Trial Balance</b>		
<b>December 31, 2014</b>		
	<b>Debit</b>	<b>Credit</b>
Cash	\$83,700	
Accounts receivable	81,100	
Allowance for doubtful accounts		\$750
Supplies	1,960	
Prepaid insurance	0	
Equipment	85,000	
Accumulated depreciation - equipment		6,250
Notes payable		7,200
Common shares		35,010
Retained earnings		161,100
Service revenue		100,000
Rent expense	9,750	
Salaries and wages	28,500	
Insurance expense	18,500	
Utilities expense	1,080	
Miscellaneous expense	720	
	<b>\$310,310</b>	<b>\$310,310</b>

**Additional information:**

1. Fees received in advance from clients were \$6,900.
2. Services performed for clients that were not recorded by December 31 were \$7,300.
3. Bad debt expense for the year was \$6,300.
4. Insurance expense included a premium paid on December 31 in the amount of \$6,000 for the period starting on January 1, 2015.
5. Equipment, net of accumulated depreciation, is being depreciated at 9% per year.
6. As part of its borrowing arrangements BlueBell issued a 90-day, 12% note for \$7,200 on December 1, 2014.
7. Rent is \$750 per month. The rent for 2014 and for January 2015 has been paid by BlueBell.
8. Salaries and wages earned but unpaid at December 31, 2014, were \$2,510.
9. At December 31, 2014 BlueBell declared dividends of \$80,000 for payment on February 1, 2015.

**Required**

From the trial balance and the additional information given, prepare annual adjusting entries as at December 31, 2014.

**QUESTION 2 (9 marks) (continued)**

(a)	-1-		
	Service Revenue.....	6,900	
	Unearned Revenue.....		6,900
	-2-		
	Accounts Receivable.....	7,300	
	Service Revenue.....		7,300
	-3-		
	Bad Debt Expense.....	6,300	
	Allowance for Doubtful Accounts.....		6,300
	-4-		
	Prepaid Insurance.....	6,000	
	Insurance Expense.....		6,000
	-5-		
	Depreciation Expense—Equipment.....	7,088	
	Accum. Depr. —Equipment.....		7,088
	(\$85,000-6,250) x 9%		
	-6-		
	Interest Expense.....	71	
	Interest Payable.....		71
	(\$7,200 X 12% X 30/365)		
	-7-		
	Prepaid Rent.....	750	
	Rent Expense.....		750
	-8-		
	Salaries and Wages Expense.....	2,510	
	Salaries and Wages Payable.....		2,510
	-9-		
	Retained Earnings.....	80,000	
	Dividends Payable.....		80,000

**QUESTION 3 (18 marks)**

**Answer ALL parts to this question. Each part is independent.**

**PART 1: (4 marks)**

Environmental Corporation specializes in the production and sale of eco-friendly packaging. In 2014, Environmental reported net income (earnings) in excess of analysts' expectations. This included a significant gain on sale of investment in the year and lower depreciation expense due to the company's change from the declining balance method (used by competitors) to the straight-line method for depreciating its equipment.

**Required**

Answer the following questions based only on the information provided. Your writing must be legible in order to be marked.

- (a) From the perspective of an investor, does Environmental have high-quality earnings? Explain your answer. (2 marks)
- (b) Will the earnings reported by Environmental be discounted in the capital markets? Explain your answer. (2 marks)
  - i. From the perspective of an investor, the earnings reported by Environmental appear to be of lower quality. The company's net income includes a significant gain on sale of investments, which means that earnings do not reflect primarily the earnings generated from ongoing core business activities. Environmental also changed from the declining balance method to the straight line method for depreciation of its equipment (which is non-typical for companies in the industry). According to GAAP, the depreciation method must reflect the pattern in which the economic benefits are expected to be consumed. Unless Environmental's pattern of use of the equipment is better reflected by the straight line method, the measurement of equipment (net) and depreciation expense may be biased.**
  - ii. The earnings reported by Environmental will likely be discounted by the capital markets. Financial statement users including investors and analysts will likely note that the company's net income included a significant gain generated from non-core business activities, and lower depreciation expense as a result of change to a depreciation method which may be biased. As a result, content of the earnings reported appears to be lower quality, and the capital markets will likely discount the earnings reported.**

**QUESTION 3 (18 marks) (continued)**

Answer ALL parts to this question. Each part is independent.

**PART 2: (14 marks)**

Butchart Corporation was incorporated and began business on January 1, 2014. It has been successful and now requires a bank loan for additional working capital to finance an expansion. The bank has requested an audited income statement for the year 2014 using IFRS.

The accountant for Butchart Corporation provides you with the following draft income statement. She tells you that the draft statement contains errors and needs your assistance in correcting the statement before its submission to the bank.

<b>Butchart Corporation</b>		
<b>Income Statement</b>		
Sales revenue		\$850,000
Dividend revenue		32,300
Gain on recovery of insurance proceeds from earthquake loss (unusual)		27,300
Unrealized holding gain on fair value-OCI investments		5,000
		914,600
Less:		
Selling expenses	\$100,000	
Cost of goods sold	510,000	
Advertising expense	13,700	
Loss on inventory due to decline in NRV	34,000	
Loss on discontinued operations	48,600	
Administrative expenses	73,400	
		779,800
Income before income taxes		134,800
Income tax		33,700
		\$101,100

Butchart had 100,000 common shares outstanding during the year. Butchart accounts for its investments in accordance with IFRS 9.

**Required**

Prepare a revised single-step statement of comprehensive income in good form.

**QUESTION 3 (18 marks) (continued)**

Answer ALL parts to this question. Each part is independent.

**PART 2: (14 marks) (continued)**

**Butchart Corporation**  
**Statement of Comprehensive Income**  
**For the Year Ended December 31, 2014**

<b>Revenues &amp; Gains</b>	
Sales revenue	\$850,000
Dividend revenue	32,300
Gain on recovery of earthquake loss	<u>27,300</u>
Total revenues & gains	<u>909,600</u>
<b>Expenses &amp; Losses</b>	
Cost of goods sold	510,000
Selling expenses (\$100,000 + \$13,700)	113,700
Administrative expenses	73,400
Loss on inventory due to decline in NRV	<u>34,000</u>
Total expenses & losses	<u>731,100</u>
<b>Income from continuing operations before income tax</b>	<b>178,500</b>
<b>Income tax*</b>	<b><u>44,625</u></b>
<b>Income from continuing operations</b>	<b>133,875</b>
<b>Discontinued operations</b>	
Loss from operations, (net of income tax recovery of \$12,150)**	<u>36,450</u>
<b>Net income</b>	<b><u>97,425</u></b>
<b>Other comprehensive income</b>	
<b>Items that may be reclassified subsequently to net income or loss:</b>	
Unrealized holding gain, (net of tax of \$1,250)	<u>3,750</u>
<b>Comprehensive income</b>	<b><u>\$101,175</u></b>
<b>Earnings per share:</b>	
Income from continuing operations	\$1.34 <sup>a</sup>
Discontinued operations	<u>(0.36) <sup>b</sup></u>
Net income	<u>\$0.98 <sup>c</sup></u>

\* The income tax rate is inferred as 25% by comparing the income tax expense to the income before income tax = \$33,700 / \$134,800.

\*\* \$12,150 = \$48,600 X 25%.

<sup>a</sup> \$133,875 / 100,000 shares

<sup>b</sup> (\$36,450) / 100,000 shares

<sup>c</sup> \$97,425 / 100,000 shares

**QUESTION 4 (21 marks)**

Answer ALL parts to this question. Each part is independent.

**PART 1: (6 marks)**

Pluto Inc. prepares financial statements in accordance with IFRS and uses the following headings on its statement of financial position:

1. Current assets
2. Long-term investments
3. Property, plant, and equipment
4. Intangible assets
5. Other assets
6. Current liabilities
7. Long-term liabilities
8. Share capital
9. Contributed surplus
10. Retained earnings
11. Accumulated other comprehensive income

**Required**

Indicate by number how each of the following should usually be classified. If an item does not need to be reported at all on the statement of financial position, use the letter X.

<b>Prepaid insurance</b>	<b>1.</b>
Investment in associate	<b>2.</b>
Unearned subscriptions revenue	<b>6. or 7.</b>
Advances to suppliers	<b>1.</b>
Unearned rent revenue	<b>6.</b>
Copyrights	<b>4.</b>
Petty cash	<b>1.</b>
Sales and tax payable	<b>6.</b>
Accrued interest on notes receivable	<b>1.</b>
Twenty-year issue of bonds payable that will mature the next year (no sinking funds exist, and refunding is not planned)	<b>6.</b>
Machinery retired from the use and reclassified as held for sale	<b>1.*</b>
Fully depreciated machine still in use	<b>3.</b>
Investment in bonds that will be held until maturity in two years	<b>2.</b>
Accrued interest on bonds payable	<b>6.</b>
Salaries that the company budget shows will be paid to employees within the next year	<b>X.</b>
Accumulated depreciation related to equipment	<b>3.</b>
Accumulated unrealized gains on securities accounted for under the fair value through OCI model	<b>11.</b>
Bank demand loan	<b>6.</b>
Land held for speculation	<b>2.</b>

**\* Under IFRS, a non-current asset may be reclassified as a current asset when it meets the criteria to be classified as held for sale.**

**QUESTION 4 (21 marks) (continued)**

Answer ALL parts to this question. Each part is independent.

**PART 2: (15 marks)**

A comparative statement of financial position for TailWind Corporation follows:

<b>TailWind Corporation</b>		
<b>Statement of Financial Position</b>		
	<b>December 31</b>	
	<b>2014</b>	<b>2013</b>
<b>Assets</b>		
Cash	\$65,000	\$29,000
Accounts receivable	87,000	59,000
Inventory	233,000	181,000
Investments in shares (fair value through OCI)	63,000	84,000
Land	65,000	103,000
Equipment	390,000	430,000
Accumulated depreciation - equipment	(117,000)	(86,000)
Goodwill	224,000	273,000
<b>Total</b>	<b>\$1,010,000</b>	<b>\$1,073,000</b>
<b>Liabilities and Shareholders' Equity</b>		
Accounts payable	\$12,000	\$51,000
Dividends payable	15,000	32,000
Notes payable	320,000	435,000
Common shares	265,000	125,000
Retained earnings	388,000	384,000
Accumulated other comprehensive income	10,000	46,000
<b>Total</b>	<b>\$1,010,000</b>	<b>\$1,073,000</b>

Additional information:

- Goodwill impairment loss was recorded in the year to reflect a decrease in the recoverable amount of goodwill. No goodwill was purchased or sold in the year.
- Dividends on common shares of \$32,000 and \$15,000 were declared in December 2013 and December 2014, respectively. The 2013 dividend was paid in January 2014 and the 2014 dividend was paid in January 2015. Dividends paid are treated as financing activities.
- On December 31, 2014, equipment with an original cost of \$40,000 and accumulated depreciation to date of \$12,000 was sold for proceeds of \$21,000. No equipment was purchased in the year.
- Fair value-OCI investments were purchased in July 2014 for a cost of \$15,000. By December 31, 2014, the fair value of TailWind's portfolio of fair value-OCI investments decreased to \$63,000. No fair value-OCI investments were sold in the year.
- In March 2014, a plot of land was purchased for future construction of a plant site. In November 2014, a different plot of land with original cost of \$86,000 was sold for proceeds of \$95,000.
- In April 2014, notes payable amounting to \$140,000 were retired through issuance of common shares. In December 2014, notes payable amounting to \$25,000 were issued.
- Net income for the fiscal year ending December 31, 2014 was \$19,000.

**Required**

Prepare a complete statement of cash flows in good form using the indirect method for cash flows from operating activities.

**Question 4 (21 marks) (continued)**

Answer ALL parts to this question. Each part is independent.

**PART 2: (15 marks) (continued)**

**TailWind Corporation  
Statement of Cash Flows  
For the Year Ended December 31, 2014**

<b>Cash flows from operating activities</b>		
Net income		<b>\$19,000</b>
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense (Note 1)	\$43,000	
Loss on sale of equipment (Note 2)	7,000	
Gain on sale of land (Note 3)	(9,000)	
Impairment loss-Goodwill (Note 5)	49,000	
Increase in accounts receivable	(28,000)	
Increase in inventory	(52,000)	
Decrease in accounts payable	<u>(39,000)</u>	<u>(29,000)</u>
Net cash used by operating activities		<b>(10,000)</b>
<b>Cash flows from investing activities</b>		
Purchase of Fair Value-OCI investments	(15,000)	
Proceeds from sale of equipment	21,000	
Purchase of land (Note 4)	(48,000)	
Proceeds from sale of land	<u>95,000</u>	
Net cash provided by investing activities		<b>53,000</b>
<b>Cash flows used by financing activities</b>		
Payment of cash dividends	(32,000)	
Issuance of notes payable	<u>25,000</u>	
Net cash used by financing activities		<u>(7,000)</u>
Net increase in cash		<b>36,000</b>
Cash at beginning of year		<u>29,000</u>
Cash at end of year		<u><b>\$65,000</b></u>

Note: During the year, TailWind retired \$140,000 in notes payable by issuing common shares.

Note 1: Solve for X, where  $\$86,000 - \$12,000 + X = \$117,000$

Note 2:  $\$21,000 - (\$40,000 - \$12,000)$

Note 3:  $\$95,000 - \$86,000$

Note 4: Solve for X, where  $\$103,000 + X - \$86,000 = \$65,000$

Note 5:  $\$273,000 - \$224,000$

**QUESTION 5 (17 marks)**

Answer ALL parts to this question. Each part is independent.

**PART 1: (12 marks)**

Kelly Construction Ltd. Has entered into a contract in February 2014 to build two warehouses for Pacific Structures Ltd. The contract has a fixed price of \$9.5 million. The following data are for the construction period:

	2014	2015	2016
Cash collected to date	\$3,100,000	\$7,250,000	\$9,350,000
Progress billings to date	3,500,000	7,600,000	9,500,000
Costs incurred on the contract during the year	3,825,000	<b>4,675,420</b>	<b>1,149,580</b>
Estimated costs to complete	4,675,000	<b>899,580</b>	-0-

Based on the above information Kelly Construction’s controller prepared the following schedule for the construction period:

	2014	2015	2016
Contract price:	<u>9,500,000</u>	<u>9,500,000</u>	<u>9,500,000</u>
Costs:			
Opening balance of costs	0	3,825,000	<b>8,500,420</b>
Costs incurred during year	<u>3,825,000</u>	<u>4,675,420</u>	<u><b>1,149,580</b></u>
Costs incurred to date	3,825,000	8,500,420	9,650,000
Estimated costs to complete	<u>4,675,000</u>	<u><b>899,580</b></u>	<u>0</u>
Total estimated costs	<u>8,500,000</u>	<u>9,400,000</u>	<u>9,650,000</u>
Percentage complete	<u>45.00%</u>	<u>90.43%</u>	<u>100.0%</u>

**Required (show all supporting calculations)**

Under the earnings approach for Kelly Construction Ltd:

(a) Complete the following table (6 marks):

	2014	2015	2016
Revenue to date	<b>4,275,000</b>	<b>*8,590,850</b>	<b>9,500,000</b>
Less previous revenue		<b>(4,275,000)</b>	<b>(8,590,850)</b>
Revenue for the year ****	<b>4,275,000</b>	<b>4,315,850</b>	<b>909,150</b>
Construction expense for year *****	<b>3,825,000</b>	<b>**4,675,420</b>	<b>1,149,580</b>
Gross profit for the year	<b>\$450,000</b>	<b>\$(359,570)</b>	<b>***\$(240,430)</b>
Cumulative gross profit for 2014 & 2015	<b>\$90,430</b>		
Cumulative gross profit for 2014, 2015, & 2016	<b>(\$150,000)</b>		

Items in red in the above table are not required in your answer and are provided for explanation purposes.

- \*8,590,850 = 9,500,000 x 90.43%
- \*\* 4,675,420 = 4,315,850 + 359,570.
- 359,570 = (9,500,000-9,400,000)x90.43% - 450,000 = 90,430 - 450,000.
- \*\*\* 240,430 = [(9,500,000-9,650,000)x100% - 90,430].
- \*\*\*\*9,500,000 = 4,275,000 + 4,315,850 + 909,150
- \*\*\*\*\*9,650,000 = 3,825,000 + 4,675,420 + 1,149,580.

**The amounts above in yellow-shading may differ from your answer because of the typos in the original exam question: you were not penalized in the marking of these yellow-shaded items as long as you followed the correct process.**

(b) Prepare all necessary journal entries for 2016, including the entries to close the contract accounts upon completion of the contract, assuming the percentage-of-completion method is used. Do not present journal entries for 2014 or 2015. (6 marks)

**QUESTION 5 (17 marks)**

**Answer ALL parts to this question. Each part is independent.**

**PART 1: (12 marks)**

**2015 (NOT ASKED):**

Construction in Process .....	4,675,000	
Materials, Cash, Payables, etc. ....		4,675,000
Construction Expenses.....	<b>4,675,420</b>	
Construction in Process . ....		<b>359,570*</b>
Revenue from Long-term Contracts		4,315,850

*\*This is an example of a “Loss in Current Period on a contract that is expected to be profitable upon completion” (see pages 341/342), as distinct from a “Loss on an Unprofitable Contract” (see page 342-344 in the text):*

*“1. Loss in current period on a profitable contract: This condition occurs when there is a significant increase in the estimated total contract costs during construction but the increase does not indicate that a loss will result once the contract is completed\*. Under the percentage-of-completion approach method only, the increase in the estimated cost requires an adjustment in the current period for the excess gross profit that was recognized on the project in prior periods. The adjustment is recorded as a loss in the current period because it is a change in an accounting estimate (discussed in Chapter 21).”*

*Usually, under the completed-contract method, when cost estimates at the end of a given period indicate that an overall loss will result once the contract is completed, that entire loss must be recognized in the period the overall loss is determinable. This is not the situation at the end of 2015 in this question: at the end of 2015 there is still no expected overall loss expected on this contract because the contractor believes the contract will generate a \$100,000 overall profit (\$9,400,000 in expected total costs versus \$9,500,000 contract price).*

Accounts Receivable (7,600,000 – 3,500,000) .....	4,100,000	
Billings on Construction in Process.....		4,100,000
Cash (7,250 – 3,100).....	4,150,000	
Accounts Receivable.....		4,150,000

**2016:**

Construction in Process .....	<b>1,149,580</b>	
Materials, Cash, Payables, etc. ....		<b>1,149,580</b>
Construction Expenses.....	<b>1,149,580</b>	
Construction in Process. ....		<b>240,430**</b>
Revenue from Long-term Contracts .....		909,150

*\*\*Loss to be recognized in 2016 = \$150,000 total loss incurred on completion of project (\$9,500,000 – \$9,650,000) less \$90,430 cumulative profit recognized as of December 31, 2015 [\$90,430 = 90.43% x (\$9,500,000 – \$9,400,000 total estimated cost of contract)]. This note is not required in your answer.*

Accounts Receivable (9,500,000 – 7,600,000) .....	1,900,000	
Billings on Construction in Process.....		1,900,000
Cash (9,350,000 – 7,250,000).....	2,100,000	
Accounts Receivable.....		2,100,000
Billings on Construction in Process.....	9,500,000	
Construction in Process .....		9,500,000

**The amounts above in yellow-shading may differ from your answer because of the typos in the original exam: you were not penalized in the marking of these yellow-shaded items as long as you followed the correct process.**

**QUESTION 5 (17 marks) (continued)**

**Answer ALL parts to this question. Each part is independent.**

**PART 2: (5 marks)**

Dave Scotland Inc. (DSI) sold inventory to a new customer, Jamali Ltd, on December 20, 2014. Jamali was given a significant discount to entice it to switch from its regular supplier. Jamali asked DSI not to ship the inventory until January 2, 2015, because Jamali's warehouse was shutting down for the holidays. DSI agreed and decided to leave the inventory on its warehouse shelves with unsold inventory. DSI felt that the shipment would be in **the** way if it was left on the shipping docks and that the shipping department could easily get the inventory ready for shipment on January 2. DSI follows IFRS and uses December 31 as its accounting year-end.

**Required**

Under IFRS, in addition to the general revenue recognition criteria, there are specific revenue recognition criteria for *bill and hold* transactions. Apply these specific revenue recognition criteria when discussing whether the Jamali transaction should be booked as a sale on DSI's 2014 financial statements under the earnings approach.

**Under IFRS, in addition to the general revenue recognition criteria (delivery of the goods, collectability, measurability), there are specific revenue recognition criteria for *bill and hold* transactions, as follows:**

**The buyer takes legal title and**

- 1. Delivery is probable;**
- 2. Item is on hand, identified, and ready for delivery;**
- 3. Buyer acknowledges the deferred delivery; and**
- 4. Payment terms are normal.**

**If Jamali took legal title to the goods and if the inventory was on hand, identified, and ready for delivery on December 31, 2014, under IFRS, an argument could be made to recognize the revenue in fiscal 2014.**

**QUESTION 6 (24 marks)**

**Answer ALL parts to this question. Each part is independent.**

**PART 1: (12 marks)**

The following information pertains to Fortini Corporation:

- i. Fortini Corporation had record high sales in 2014.
- ii. Fortini began 2014 with an Accounts Receivable balance of \$475,000 and an allowance for Doubtful Accounts of \$33,000.
- iii. Fortini recognized credit sales during the year of \$6,675,000.
- iv. Fortini made monthly adjusting entries equal to 0.5% of each month's credit sales to recognize bad debt expense.
- v. Also during the year Fortini wrote off \$35,500 of accounts that were deemed to be uncollectible.
- vi. One customer whose \$4,000 account has been written off surprised Fortini management by paying the amount in full in late September.
- vii. Including this surprise \$4,000 receipt, \$6,568,500 cash was collected by Fortini on account in 2014.
- viii. In preparation for the audited year-end financial statements, Fortini's controller prepared the following aged listing of the receivables at December 31, 2014:

Days Account Outstanding	Amount	Probability of collection
Less than 16 days	\$270,000	97%
Between 16 and 30 days	117,000	92%
Between 31 and 45 days	80,000	80%
Between 46 and 60 days	38,000	70%
Between 61 and 75 days	20,000	50%
Over 75 days	25,000	0%
	<b>\$550,000</b>	

**Required**

- (a) Reconcile the 2014 opening balance in Fortini's Accounts Receivable to the \$550,000 ending balance on the controller's aged listing. (4 marks)
- (b) Prepare the adjusting journal entry required to bring Fortini's Allowance for Doubtful Accounts to its proper balance at year end. (8 marks)

(a)	<b>Opening balance</b>	<b>\$ 475,000</b>
	<b>Credit sales in year</b>	<b>6,675,000</b>
	<b>Accounts written off</b>	<b>(35,500)</b>
	<b>Reinstatement of account collected</b>	<b>4,000</b>
	<b>Cash collected on account</b>	<b>(6,568,500)</b>
	<b>Ending balance</b>	<b><u>\$ 550,000</u></b>

- (b) **Balance in Allowance for Doubtful Accounts before year-end adjusting entry:**  
 $\$33,000 + 33,375^* - \$35,500 + \$4,000 - \$25,000 = \$ 9,875 \text{ cr}$

<b>Correct ("target") balance of Allowance account</b>	<b><u>54,860</u> cr</b>
<b>Amount needed for adjustment</b>	<b><u>\$44,985</u> cr</b>

	<b>December 31, 2014</b>	
<b>Bad Debt Expense</b>		<b>44,985</b>
<b>    Allowance for Doubtful Accounts</b>		<b>44,985</b>

\$270,000	97%	3%	\$8,100
117,000	92%	8%	9,360
80,000	80%	20%	16,000
38,000	70%	30%	11,400
20,000	50%	50%	10,000
25,000	0%		
<b>\$550,000</b>			<b>\$54,860</b>

$*33,375 = 0.5\% \times \$6,675,000$

**QUESTION 6 (24 marks) (continued)**

Answer ALL parts to this question. Each part is independent.

**PART 2: (12 marks)**

At the beginning of year-1 Tianjin Limited received a \$100,000 note in exchange for professional services it provided a client. The note bears an 8.00% annual rate of interest and will be repaid at the end of year-3. The interest is paid annually, at the end of each year. Tianjin Limited assessed the note receivable's term and risk as well as prevailing interest rates before deciding to use 6.00% when valuing the note. Tianjin uses the effective interest rate amortization method.

**REQUIRED**

- (a) Prepare Tianjin Limited's journal entry to record the receipt of this note receivable. (3 marks)
- (b) Prepare Tianjin Limited's amortization table for this note receivable. (4 marks)
- (c) Prepare Tianjin Limited's journal entries at the end of years 1, 2, and 3. (5 marks)

Notes\_Receiveable\_& x Startpage Search En: x  
 bomode.telfer.uottawa.ca/notesrecpay/notereceivable\_Sheet.aspx

## Accounting for Notes Receivable & Payable

[using the amortized cost model]

Reset Recalculate

NoteReceivable | NotePayable | OtherLearningApplications

A	B	C	D	E	F	G	H	I	
<b>Accounting for a Note Receivable using the amortized cost measurement model.</b>									
1									
2									
3									
4									
5									
6									
7									
8									
<p>Face value (sometimes called 'maturity value') of the note. <span style="float: right;">\$100,000</span></p> <p>Number of years from issuance to the note's maturity date. <span style="float: right;">3</span></p> <p>Stated rate (sometimes called 'coupon rate' or 'nominal rate'). <span style="float: right;">8.00%</span></p> <p>Market rate (sometimes called 'yield', 'required rate of return', 'discount rate', 'effective rate', or 'valuation rate'). <span style="float: right;">6.00%</span></p> <p>Amortization method. <span style="float: right;">Effective interest rate</span></p>									
<p><i>At the beginning of year-1 Tianjin Limited received a \$100,000 note in exchange for professional services it provided a client. The note bears a 8.00% annual rate of interest and will be repaid at the end of year-3. The interest is paid annually, at the end of each year. Tianjin Limited assessed the note receivable's term and risk as well as prevailing interest rates before deciding to use 6.00% when valuing the note. Tianjin uses the effective interest rate amortization method.</i></p> <p><b>REQUIRED</b></p> <p>(1) Prepare Tianjin Limited's journal entry to record the receipt of this note receivable.</p> <p>(2) Prepare Tianjin Limited's amortization table for this note receivable.</p> <p>(3) Prepare Tianjin Limited's journal entries at the end of years 1, 2, and 3.</p>									
9									
10									
11	<b>Part (1): First, calculate the present value of the note receivable.</b>								
12	Yearly interest payment = \$100,000 x 8.00%							\$8,000	
13	Present Value Interest Factor (PVIF), using 6.00%, of the interest annuity.							2.673012	
14	PVIF, using 6.00%, of the maturity value (sometimes called 'face value').							0.839619	
15									
16	PV of interest [= \$8,000.00 x 2.673012]							\$21,384.10	
17	PV of maturity value (sometimes called 'face value') [= \$100,000 x 0.839619]							83,961.93	
18	PV of the expected cash inflows from the note							\$105,346.02	
19									
20	Premium on the note receivable [= \$105,346.02 - \$100,000.00]							\$5,346.02	
21									
22	<b>Part (1): Second, prepare the journal entry to record the receipt of the note receivable.</b>								
23								Debit	Credit
24	Notes receivable							\$105,346.02	
25	Sales revenue (professional services)								\$105,346.02
26									
27									

Part (2)								
A	B	D	E = \$100,000 x 8.00%	F = C x 6.00%	G = E - F	H = D - G	I = C - G	
Year	Amortized cost [unamortized carrying amount] of the note at the BOY**	Unamortized premium on the note receivable at the BOY	Debit: Cash account	Credit: Interest revenue account	Credit: Note Receivable account [this equals the annual amortization of the \$5,346.02 premium on the note receivable]	Unamortized premium on the note receivable at the EOY**	Amortized cost [unamortized carrying amount] of the note at the EOY	
1	\$105,346.02	\$5,346.02	\$8,000.00	\$6,320.76	\$1,679.24	\$3,666.79	\$103,666.79	
2	\$103,666.79	\$3,666.79	\$8,000.00	\$6,220.01	\$1,779.99	\$1,886.79	\$101,886.79	
3	\$101,886.79	\$1,886.79	\$8,000.00	\$6,113.21	\$1,886.79	\$0.00	\$100,000.00	
4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
6	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
7	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
8	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
9	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>TOTALS</b>			\$24,000.00	\$18,653.98	\$5,346.02			

\*\* BOY = beginning of the year; EOY = end of the year.

Part (3)		Debit	Credit
<b>31/12/Year-1</b>			
Cash		8,000.00	
Note Receivable			1,679.24
Interest revenue			6,320.76
<b>31/12/Year-2</b>			
Cash		8,000.00	
Note Receivable			1,779.99
Interest revenue			6,220.01
<b>31/12/Year-3</b>			
Cash		8,000.00	
Note Receivable			1,886.79
Interest revenue			6,113.21
Cash		100,000.00	
Notes receivable			100,000.00

# Financial Tables

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

Period/Per	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.9900990	0.9803922	0.9708738	0.9615385	0.9523810	0.9433962	0.9345794	0.9259259	0.9174312	0.9090909	0.9009009	0.8928571
2	0.9802960	0.9611688	0.9425959	0.9245562	0.9070295	0.8899964	0.8734387	0.8573388	0.8416800	0.8264463	0.8116224	0.7971939
3	0.9705901	0.9423223	0.9151417	0.8889964	0.8638376	0.8396193	0.8162979	0.7938322	0.7721835	0.7513148	0.7311914	0.7117802
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
5	0.9514657	0.9057308	0.8626088	0.8219271	0.7835262	0.7472582	0.7129862	0.6805832	0.6499314	0.6209213	0.5934513	0.5674269
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
7	0.9327181	0.8705602	0.8130915	0.7599178	0.7106813	0.6650571	0.6227497	0.5834904	0.5470342	0.5131581	0.4816584	0.4523492
8	0.9234832	0.8534904	0.7894092	0.7306902	0.6768394	0.6274124	0.5820091	0.5402689	0.5018663	0.4665074	0.4339265	0.4038832
9	0.9143398	0.8367553	0.7664167	0.7025867	0.6446089	0.5918985	0.5439337	0.5002490	0.4604278	0.4240976	0.3909248	0.3606100
10	0.9052870	0.8203483	0.7440939	0.6755642	0.6139133	0.5583948	0.5083493	0.4631935	0.4224108	0.3855433	0.3521845	0.3219732
11	0.8963237	0.8042630	0.7224213	0.6495809	0.5846793	0.5267875	0.4750928	0.4288829	0.3875329	0.3504939	0.3172833	0.2874761
12	0.8874492	0.7884932	0.7013799	0.6245970	0.5568374	0.4969694	0.4440120	0.3971138	0.3555347	0.3186308	0.2858408	0.2566751
13	0.8786626	0.7730325	0.6809513	0.6005741	0.5303214	0.4688390	0.4149644	0.3676979	0.3261786	0.2896644	0.2575143	0.2291742
14	0.8699630	0.7578750	0.6611178	0.5774751	0.5050680	0.4423010	0.3878172	0.3404610	0.2992465	0.2633313	0.2319948	0.2046198
15	0.8613495	0.7430147	0.6418619	0.5552645	0.4810171	0.4172651	0.3624460	0.3152417	0.2745380	0.2393920	0.2090043	0.1826963
16	0.8528213	0.7284458	0.6231669	0.5339082	0.4581115	0.3936463	0.3387346	0.2918905	0.2518698	0.2176291	0.1882922	0.1631217
17	0.8443775	0.7141626	0.6050164	0.5133732	0.4362967	0.3713644	0.3165744	0.2702690	0.2310732	0.1978447	0.1696326	0.1456443
18	0.8360173	0.7001594	0.5873946	0.4936281	0.4155207	0.3503438	0.2958639	0.2502490	0.2119937	0.1798588	0.1528222	0.1300396
19	0.8277399	0.6864308	0.5702860	0.4746424	0.3957340	0.3305130	0.2765083	0.2317121	0.1944897	0.1635080	0.1376776	0.1161068
20	0.8195445	0.6729713	0.5536758	0.4563869	0.3768895	0.3118047	0.2584190	0.2145482	0.1784309	0.1486436	0.1240339	0.1036668
21	0.8114302	0.6597758	0.5375493	0.4388336	0.3589424	0.2941554	0.2415131	0.1986557	0.1636981	0.1351306	0.1117423	0.0925596
22	0.8033962	0.6468390	0.5218925	0.4219554	0.3418499	0.2775051	0.2257132	0.1839405	0.1501817	0.1228460	0.1006687	0.0826425
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
24	0.7875661	0.6217215	0.4919337	0.3901215	0.3100679	0.2469785	0.1971466	0.1576993	0.1264049	0.1015256	0.0817050	0.0658821
25	0.7797684	0.6095309	0.4776056	0.3751168	0.2953028	0.2329986	0.1842492	0.1460179	0.1159678	0.0922960	0.0736081	0.0588233
26	0.7720480	0.5975793	0.4636947	0.3606892	0.2812407	0.2198100	0.1721955	0.1352018	0.1063925	0.0839055	0.0663136	0.0525208
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
28	0.7568356	0.5743746	0.4370768	0.3334775	0.2550936	0.1956301	0.1504022	0.1159137	0.0895484	0.0693433	0.0538216	0.0418693
29	0.7493421	0.5631123	0.4243464	0.3206514	0.2429463	0.1845567	0.1405628	0.1073275	0.0821545	0.0630394	0.0484879	0.0373833
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
31	0.7345771	0.5412460	0.3999871	0.2964603	0.2203595	0.1642548	0.1227730	0.0920160	0.0691478	0.0520987	0.0393539	0.0298017
32	0.7273041	0.5306333	0.3883370	0.2850579	0.2098662	0.1549574	0.1147411	0.0852000	0.0634384	0.0473624	0.0354540	0.0266087
33	0.7201031	0.5202287	0.3770262	0.2740942	0.1998725	0.1461862	0.1072347	0.0788889	0.0582003	0.0430568	0.0319405	0.0237577
34	0.7129733	0.5100282	0.3660449	0.2635521	0.1903548	0.1379115	0.1002193	0.0730453	0.0533948	0.0391425	0.0287752	0.0212123
35	0.7059142	0.5000276	0.3553834	0.2534155	0.1812903	0.1301052	0.0936629	0.0676345	0.0489861	0.0355841	0.0259236	0.0189395
36	0.6989249	0.4902232	0.3450324	0.2436687	0.1726574	0.1227408	0.0875355	0.0626246	0.0449413	0.0323492	0.0233546	0.0169103
37	0.6920049	0.4806109	0.3349829	0.2342968	0.1644356	0.1157932	0.0818088	0.0579857	0.0412306	0.0294083	0.0210402	0.0150985
38	0.6851534	0.4711872	0.3252262	0.2252854	0.1566054	0.1092389	0.0764569	0.0536905	0.0378262	0.0267349	0.0189551	0.0134808
39	0.6783697	0.4619482	0.3157535	0.2166206	0.1491480	0.1030555	0.0714550	0.0497134	0.0347030	0.0243044	0.0170767	0.0120364
40	0.6716531	0.4528904	0.3065568	0.2082890	0.1420457	0.0972222	0.0667804	0.0460309	0.0318376	0.0220949	0.0153844	0.0107468

Table 4: PRESENT VALUE of Annuity of \$1.00 in arrears.												
Period/Per	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
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
2	1.970395	1.941561	1.913470	1.886095	1.859410	1.833393	1.808018	1.783265	1.759111	1.735537	1.712523	1.690051
3	2.940985	2.883883	2.828611	2.775091	2.723248	2.673012	2.624316	2.577097	2.531295	2.486852	2.443715	2.401831
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
5	4.853431	4.713460	4.579707	4.451822	4.329477	4.212364	4.100197	3.992710	3.889651	3.790787	3.695897	3.604776
6	5.795476	5.601431	5.417191	5.242137	5.075692	4.917324	4.766540	4.622880	4.485919	4.355261	4.230538	4.111407
7	6.728195	6.471991	6.230283	6.002055	5.786373	5.582381	5.389289	5.206370	5.032953	4.868419	4.712196	4.563757
8	7.651678	7.325481	7.019692	6.732745	6.463213	6.209794	5.971299	5.746639	5.534819	5.334926	5.146123	4.967640
9	8.566018	8.162237	7.786109	7.435332	7.107822	6.801692	6.515232	6.246888	5.995247	5.759024	5.537048	5.328250
10	9.471305	8.982585	8.530203	8.110896	7.721735	7.360087	7.023582	6.710081	6.417658	6.144567	5.889232	5.650223
11	10.367628	9.786848	9.252624	8.760477	8.306414	7.886875	7.498674	7.138964	6.805191	6.495061	6.206515	5.937699
12	11.255077	10.575341	9.954004	9.385074	8.863252	8.383844	7.942686	7.536078	7.160725	6.813692	6.492356	6.194374
13	12.133740	11.348374	10.634955	9.985648	9.393573	8.852683	8.357651	7.903776	7.486904	7.103356	6.749870	6.423548
14	13.003703	12.106249	11.296073	10.563123	9.898641	9.294984	8.745468	8.244237	7.786150	7.366687	6.981865	6.628168
15	13.865053	12.849264	11.937935	11.118387	10.379658	9.712249	9.107914	8.559479	8.060688	7.606080	7.190870	6.810864
16	14.717874	13.577709	12.561102	11.652296	10.837770	10.105895	9.446649	8.851369	8.312558	7.823709	7.379162	6.939986
17	15.562251	14.291872	13.166118	12.165669	11.274066	10.477260	9.763223	9.121638	8.543631	8.021553	7.548794	7.119630
18	16.398269	14.992031	13.753513	12.659297	11.689587	10.827603	10.059087	9.371887	8.755625	8.201412	7.701617	7.249670
19	17.226008	15.678462	14.323799	13.133939	12.085321	11.158116	10.335595	9.603599	8.950115	8.364920	7.839294	7.365777
20	18.045553	16.351433	14.877475	13.590326	12.462210	11.469921	10.594014	9.818147	9.128546	8.513564	7.963328	7.469444
21	18.856983	17.011209	15.415024	14.029160	12.821153	11.764077	10.835527	10.016803	9.292244	8.648694	8.075070	7.562003
22	19.660379	17.658048	15.936917	14.451115	13.163003	12.041582	11.061240	10.200744	9.442425	8.771540	8.175739	7.644646
23	20.455821	18.292204	16.443608	14.856842	13.488574	12.303379	11.272187	10.371059	9.580207	8.883218	8.266432	7.718434
24	21.243387	18.913926	16.935542	15.246963	13.798642	12.550358	11.469334	10.528758	9.706612	8.984744	8.348137	7.784316
25	22.023156	19.523456	17.413148	15.622080	14.093945	12.783356	11.653583	10.674776	9.822580	9.077040	8.421745	7.843139
26	22.795204	20.121036	17.876842	15.982769	14.375185	13.003166	11.825779	10.809978	9.928972	9.160945	8.488058	7.895660
27	23.559608	20.706898	18.327031	16.329586	14.643034	13.210534	11.986709	10.935165	10.026580	9.237223	8.547800	7.942554
28	24.316443	21.281272	18.764108	16.663063	14.898127	13.406164	12.137111	11.051078	10.116128	9.306567	8.601622	7.984423
29	25.065785	21.844385	19.188455	16.983715	15.141074	13.590721	12.277674	11.158406	10.198283	9.369606	8.650110	8.021806
30	25.807708	22.396456	19.600441	17.292033	15.372451	13.764831	12.409041	11.257783	10.273654	9.426914	8.693793	8.055184
31	26.542285	22.937702	20.000428	17.588494	15.592811	13.929086	12.531814	11.349799	10.342802	9.479013	8.733146	8.084986
32	27.269589	23.468335	20.388766	17.873551	15.802677	14.084043	12.646555	11.434999	10.406240	9.526376	8.768600	8.115594
33	27.989693	23.988564	20.765792	18.147646	16.002549	14.230230	12.753790	11.513888	10.464441	9.569432	8.800541	8.135352
34	28.702666	24.498592	21.131837	18.411198	16.192904	14.368141	12.854009	11.586934	10.517835	9.608575	8.829316	8.156564
35	29.408580	24.998619	21.487220	18.664613	16.374194	14.498246	12.947672	11.654568	10.566821	9.644159	8.855240	8.175504
36	30.107505	25.488842	21.832252	18.908282	16.546852	14.620987	13.035208	11.717193	10.611763	9.676508	8.878594	8.192414
37	30.799510	25.969453	22.167235	19.142579	16.711287	14.736780	13.117017	11.775179	10.652993	9.705917	8.899635	8.207513
38	31.484663	26.440641	22.492462	19.367864	16.867893	14.846019	13.193473	11.828869	10.690820	9.732651	8.918590	8.220993
39	32.163033	26.902589	22.808215	19.584485	17.017041	14.949075	13.264928	11.878582	10.725523	9.756956	8.935666	8.233030
40	32.834686	27.355479	23.114772	19.792774	17.159086	15.046297	13.331709	11.924613	10.757360	9.779051	8.951051	8.243777

**ROUGH WORK**  
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