École de gestion TELFER School of Management

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Mid Term Exam
Intermediate Financial Accounting II
Fall 2012
ADM3340

(SUGGESTED SOLUTIONS)

Name: _____ **ID#:** _____

INSTRUCTIONS:

- Write your name and student ID number above.
- Turn off all cell phones.
- **Write the exam in pen.** Exams written in pencil will not be marked and will receive zero marks.
- This examination **"SUGGESTED SOLUTION"** comprises **5** multi-part questions over **18** numbered pages. Answer all questions in this booklet. Booklet is **not** to be removed from the examination room. You may not separate the pages.
- Limit your answer to the space provided. Blank sheets for 'rough work' are provided at the back of this booklet. Any 'rough work' on pages **17** and **18** will not be marked.
- This exam will be marked out of 100 marks (for convenience) and is 2½ hours long. You should budget approximately 1.5 minutes per mark. The exam is worth 40% 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.
- Language (non-electronic) dictionaries are allowed with the proctor's permission.
- You ***must*** sign the Statement of Academic integrity on page 2 of this exam.

	Question		Marks
Chapter 12	1: part 1	Capitalization criteria: development costs	/6
	1: part 2	Goodwill	/6
	1: part 3	Impairment	/9
Chapter 13	2: part 1	Definitions	/8
	2: part 2	Refinancing short term debt	/9
Chapter 14	3: part 1	Bond liabilities: issuance	/9
	3: part 2	Bond liabilities: interest expense	/12
	3: part 3	Troubled debt restructuring	/12
Chapter 15	4: part 1	Dividends	/7
	4: part 2	Shareholders' equity transactions	/9
Chapter 16	5: part 1	Derivative	/7
	5: part 2	Purchase commitment	/6
	TOTAL		/100

Statement of Academic Integrity
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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 (21 marks)

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

PART 1: (6 marks)

List the criteria that must be met before development costs of a research and development project may be capitalized.

Solution

1. Technical feasibility of completing the intangible asset
2. The entity's intention to complete it for use or sale
3. The entity's ability to use or sell it
4. Availability of technical, financial, and other resources needed to complete it, and to use or sell it
5. The way in which the future economic benefits will be received; including the existence of a market for the asset if it will be sold, or its usefulness to the entity if it will be used internally
6. The ability to reliably measure the costs associated with and attributed to the intangible asset during its development

PART 2: (6 marks)

On September 30, 2012 Gayle Manufacturing Company decided to expand further by purchasing Schumacher Company. The balance sheet of Schumacher Company as of September 30, 2012 was as follows:

Schumacher Company
Balance Sheet
September 30, 2012

Assets		Equities	
Cash	$ 210,000	Accounts payable	$ 325,000
Receivables	450,000	Common shares	800,000
Inventory	275,000	Retained earnings	835,000
Plant assets (net)	1,025,000		
Total assets	$1,960,000	Total equities	$1,960,000

An appraisal, agreed to by the parties, indicated that the fair market value of the inventory was $250,000 and that the fair market value of the plant assets was $1,000,000. The fair market value of the receivables and payables equals the amounts reported on the balance sheet. The agreed purchase price was $3.25 million, and this amount was paid in cash to the previous owners of Schumacher Company. The $3.25 million includes $100,000 paid for Schumacher's internally developed customer lists and $200,000 paid for Schumacher's internally developed trademark.

Required

Determine the amount of goodwill (if any) implied in the purchase price of $3.25 million. Show calculations.

Solution

Purchase price		$3,250,000
Less tangible net assets acquired:		
Book value [$1,960,000 - $325,000]	$1,635,000	
Appraisal decrement—inventory	-25,000	
Appraisal decrement—plant assets	-25,000	
Total fair market value of tangible net assets acquired	1,585,000	
Add fair value of intangible asset acquired (customer lists)	100,000	
Add fair value of intangible asset acquired (trademark)	200,000	
Total fair market value of tangible and intangible net assets acquired		1,885,000
Goodwill		$1,365,000

Question 1 (21 marks) (continued)

Part 3: (9 marks)

At the end of 2011, Lagos Corporation, a publicly accountable enterprise, owns a patent with a remaining useful life of 10 years and a carrying amount of $530,000. Lagos expects future net (undiscounted) cash flows from this patent to total $535,000.The patent's fair value is $490,000 and disposal costs are estimated to be $30,000. The discounted cash flows (i.e., value in use) would be $475,000. The company's accounting year-end is 31st December.

Required:

a) Determine if the patent is impaired at the end of 2011. Prepare any journal entries that are necessary at 31st December 2011.

b) Assume the recoverable amount is calculated to be $500,000 at the end of 2012. Prepare any journal entries needed at 31st December 2012 related to impairment at the end of 2012.

Solution

(the textual explanations provided below are for educational purposes and are not a required part of the solution)

(a) Under IFRS, the recoverable amount is the higher of fair value less costs to sell or the value in use (both of which are discounted amounts). There is an impairment under IFRS since:

Recoverable amount of $475,000 < Carrying amount of $530,000.
The impairment of $55,000 would be recorded.

The 31st December 2011 journal entry under IFRS would be:

Dr. Impairment loss*	55,000	
Cr. Accumulated impairment losses—patent		55,000

After this j/e on 31/12/2011 the asset's carrying amount = $475,000 [=$530,000 - $55,000]

(b) Under IFRS, if the estimates used to determine the asset's value in use and fair value less costs to sell have changed, then a reversal of the impairment can be recognized. The reversal amount, however, is limited when using the cost (rather than revaluation) model. The specific asset cannot be increased in value to more than what its book value would have been, net of depreciation/amortization, if the original impairment loss had never been recognized.

Under IFRS, a reversal of the impairment is required. There would be a reversal since the recoverable amount of $500,000 > carrying amount of $427,500**

** Carrying amount at end of 2012 = 475,000 – 47,500 [amortization 475,000/10years] = $427,500

Under IFRS the reversal cannot increase the asset's value to more than what its carrying amount would have been, if the original impairment loss had never been recognized (.e. $530,000 – $53,000 amortization = $477,000).

Therefore the maximum reversal permitted at 31/12/2012 = $477,000 - $427,500 = $49,500

The 31st December 2011 journal entry under IFRS would be:

Accumulated impairment losses – patent.....	49,500	
Impairment recovery*.....		49,500

The carrying value is increased to $477,000

* This is an income statement account.

QUESTION 2 (17 marks)

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

PART 1: (8 marks)

a) Define *liability*. (3 marks)

Solution

Definition in Existing IFRS and *CICA Handbook*, Part II (a summary)

A **liability** is an obligation that arises from past transactions or events, which may result in a transfer of assets.

Liabilities have three essential characteristics:

1. They embody a **duty or responsibility**.
2. The entity has **little or no discretion to avoid the duty**.
3. The **transaction** or event that obliges the entity **has occurred**.

b) Complete the following table. Assume ASPE. (5 marks)

	Item	For each item specify which, if any, of the following classifications, is correct: Current Asset, Non-Current Asset, Current Liability, Long-term Liability, or Shareholder's Equity.	If a liability, is it a financial liability? Answer YES or NO.
1	Accrued vacation pay		
2	Income tax instalments paid in excess of the income tax liability on the year's income		
3	Service warranties on appliance sales		
4	A bank overdraft		
5	Employee payroll deductions unremitted		
6	Unpaid bonus to officers of the company		
7	A deposit received from a customer to guarantee performance of a contract		
8	Sales taxes payable		
9	Gift certificates sold to customers but not yet redeemed		
10	Premium offers outstanding		

Solution

Classifications on balance sheet prepared under ASPE

	Item	For each item specify which, if any, of the following classifications, is correct: Current Asset, Non-Current Asset, Current Liability, Long-term Liability, or Shareholder's Equity.	If a liability, is it a financial liability? Answer YES or NO.
1.	Accrued vacation pay	Current liability	YES
2.	Income tax instalments paid in excess of the income tax liability on the year's income	Current asset.	
3.	Service warranties on appliance sales	Current liability or long-term	NO

		liability depending on term of warranty	
4.	A bank overdraft	Current liability	YES
5.	Employee payroll deductions unremitted	Current liability	YES
6.	Unpaid bonus to officers	Current liability	YES
7.	A deposit received from a customer to guarantee performance of a contract	Current or noncurrent liability depending upon the time involved;	not a financial liability (if deposit will be returned then it would be a financial liability).
8.	Sales taxes payable	Current liability	NO*
9.	Gift certificates sold to customers but not yet redeemed	Current liability	NO
10.	Premium offers outstanding	Current liability	NO

*not a *financial* liability because it is not a contractual obligation (it is created by legislation: see bottom of the text's page 834).

PART 2: (9 marks)

On December 31, 2011, Zimmer Corporation has $7.9 million of short-term debt in the form of notes payable that will be due periodically in 2012 to Provincial Bank. On January 28, 2012, Zimmer enters into a refinancing agreement with the bank that will permit it to borrow up to $3,420,000, repayable in June 2013, using its accounts receivable as collateral. The interest cost of the maturing short-term debt is 15%, and the new agreement calls for a fluctuating interest rate at 1% above the prime rate on notes due in 2013. Zimmer's December 31, 2011 balance sheet is issued on February 15, 2012.

Required

a) Assuming that Zimmer follows ASPE, prepare a partial balance sheet for Zimmer Corporation at December 31, 2011, that shows how its $7.9 million of short-term debt should be presented, including any necessary note disclosures.

b) Assuming that Zimmer follows IFRS, explain how the $7.9 million of short-term debt should be presented on the December 31, 2011 balance sheet.

Solution

Zimmer Corporation
Partial Balance Sheet
December 31, 2011

Current liabilities:	
Notes payable (Note 1)	$4,480,000
Long-term debt:	
Notes payable expected to be refinanced in 2012 (Note 1)	3,420,000

Note 1.

Under a financing agreement with Provincial Bank the company may borrow up to $3,420,000, using its accounts receivable as collateral, at an interest cost of 1% above the prime rate. The company intends to issue notes maturing in June 2013 to replace $3,420,000 of short-term, 15%, notes due periodically in 2012. $3,420,000 of the $7,900,000 of currently maturing debt has been reclassified as long-term debt.

b) Under IFRS, since the $7.9m debt is due within 12 months from the reporting date, it is classified as a current liability. This classification holds even if a long-term refinancing has been completed before the financial statements are released. The only exception accepted for applying long-term classification is if, at the balance sheet date, the entity expects to refinance current debt or roll it over under an existing agreement for at least 12 months and the decision is solely at its discretion. The international standard has a stringent requirement that the agreement must be firm at the balance sheet date.

QUESTION 3 (33 marks)

PART 1: (9 marks)

On July 31, 2012 BondBeagle Inc. issues $1,000,000 face value bonds. The bond date is May 31, 2012 and the bonds carry a coupon rate of 1% per year, payable semi-annually on May 31 and November 30. The bonds' maturity date is May 31, 2032. The bonds provide an annual yield of 2%.

BondBeagle Inc. uses the effective interest rate method to amortize any bond premium or discount. BondBeagle Inc.'s accounting year-end is July 31.

Required

Present BondBeagle's journal entry to record the issuance of the bonds: show all supporting calculations.

Solution: **see www.bondbeagle.com**

Intro | INPUT | Text | Date_Tables | Issuance_Calc | **Issuance** | I1 | I2 | I3 | I4 | I5 | Retireme

	B	C	D	E
2	July 31, 2012	Date of issuance	Dr	Cr
3				
4	Bond discount		163,055.98	
5	Cash		838,610.68	
6		Interest payable		1,666.67
7		Bonds payable		1,000,000.00
8				
9				

To record the issuance of 20.00-year bonds, face value $1,000,000, stated interest rate 1.0000% per annum.
The bond date is May 31, 2012 with interest paid semi-annually.
There are 238 months (including 40 interest payments) between the bond's issuance and maturity dates.
For details of how this journal entry's amounts are determined, please refer to the ISSUANCE_CALC sheet.

The following table is not required in your solution:

9	Accrued interest payable on the issuance date	1,666.67	= $1,000,000 x 1.0000% x 2/12 months
10	Bond proceeds, excluding any accrued interest and issuance costs (see detailed calculation below)	836,944.02	= $835,823 + [($839,185 - $835,823) x 2/6 months]
11	Face value of bonds	1,000,000.00	
12	Bond discount	-163,055.98	= $836,944 - $1,000,000
13			
14	Total proceeds on issuance, including accrued interest payable	838,610.68	= $836,944 + $1,667
15			
16	The closest preceding interest payment date to the issuance date is	May 31, 2012	(2 months before July 31, 2012)
17	Issuance date	July 31, 2012	
18	The first interest payment date after the issuance date is	November 30, 2012	(4 months after July 31, 2012)
19			

		If the bonds were issued on:	
20			
21		May 31, 2012	November 30, 2012
22		There would be 40 semi-annual interest payments (240 months) between May 31, 2012 and the maturity date, May 30, 2032	There would be 39 semi-annual interest payments (234 months) between November 30, 2012 and the maturity date, May 30, 2032
23	Present value of the bond's 40.00 semi-annual interest payments of $5,000 (= $1,000,000 x 1.0000%/2) at 1.0000% effective interest rate [$164,173 = 32.83469 x $5,000]	164,173.45	
24	Present value of the maturity value of $1,000,000 at the end of 40.00 periods at 1.0000% effective interest rate [$671,650 = 0.67165 x $1,000,000]	671,650.00	
25	Present value of the bond's 39.00 semi-annual interest payments of $5,000 (= $1,000,000 x 1.0000%/2) at 1.0000% effective interest rate [$160,815 = 32.16303 x $5,000]		160,815.15
26	Present value of the maturity value of $1,000,000 at the end of 39.00 periods at 1.0000% effective interest rate [$678,370 = 0.67837 x $1,000,000]		678,370.00
27	Total	835,823.45	839,185.15
	Bond proceeds, excluding any accrued interest and issuance cost, on July 31, 2012 (which lies between May 31, 2012 and November 30, 2012). $836,944 = $835,823 + {[($839,185 - $835,823)/6months] x 2months}	836,944.02	

Question 3 (33 marks) (continued)

PART 2: (12 marks)

On July 31, 2012 BondBeagle Inc. issues $1,000,000 face value bonds. The bond date is May 31, 2012, and the bonds carry a coupon rate of 6% per year, payable semi-annually on May 31 and November 30. The bonds' maturity date is May 31, 2032. The bonds provide an annual yield of 4%.

BondBeagle Inc. uses the effective interest rate method to amortize any bond premium or discount. BondBeagle Inc.'s accounting year-end is July 31.

Required

Prepare BondBeagle's journal entry for these bonds on November 30, 2013 to update accrued interest and any bond discount amortization. (Show all relevant computations).

Solution

To answer this question you must first determine the amortized cost (carrying value) of the bond at 31 May, 2013 (shown as $1,264,406 below), the interest payment date immediately preceding 30 November, 2013.

2013	7
2014-2032	216 (18yrs x 12)
2052	5
	228 months

228/6 = 38 interest periods

31 May 2013 to 31 May 2032: 38 interest payment periods (does not include 31May 2013)

$30,000	x 26.440641 =	$ 793,219
$1,000,000 x	0.47118719 =	471,187
Amortized cost at 31 May 2013	=	$1,264,406 (rounded)

The following amortization table is not required in your solution:

Intro | INPUT | Text | Date_Tables | Issuance_Calc | Issuance | I1 | I2 | I3 | I4 | I5 | Retirement | R1 | R2 | R3 | R4 | R5 | Maturity | Amort_Table | IRR | Sensitivity

This table displays data for a maximum of 40 interest payment periods. (All amounts rounded).

Instructions: Enter your data in the INPUT screen: all other screens are "Output screens".

				Beginning Balances		Data for journal entries				Data for journal entries		Ending Balances	
			Bond Premium A/C	Net bond liability (book or carrying value, or amortized cost), beginning of the period.	Debit Interest Expense A/C	Credit Cash A/C	Debit Bond Premium A/C	Net bond liability (amortized cost) at the end of the period.			Bond Premium A/C	Net bond liability at the end of the period, and prior to maturity.
					2.0000% (=yield) interest expense per interest payment period.	3.0000% [6.0000%/2] interest payment per period.	Bond premium amortization.					
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
Date at beginning of period	Date at end of period	Period			A4 = A3 x 2.0000% (See Notes below this table for period 1's $16,980 calculation)	$20,000 in period 1 does not include repayment by the company of the $10,000 interest accrued on July 31, 2012, the date of issuance ($20,000 + $10,000 = $30,000)	A6 = A4 - A5	A7 = A3 + A6 (See Notes below this table for period 1's $1,269,026 calculation)			A10 = A2 + A6 (no retirement in this example)	A11 = A7 (no retirement in this example)
31-Jul-12	30-Nov-12	1	272,046	1,272,046	16,980	20,000	-3,020	1,269,026			269,026	1,269,026
1-Dec-12	31-May-13	2	269,026	1,269,026	25,381	30,000	-4,619	1,264,406			264,406	1,264,406
1-Jun-13	30-Nov-13	3	264,406	1,264,406	25,288	30,000	-4,712	1,259,695			259,695	1,259,695
1-Dec-13	31-May-14	4	259,695	1,259,695	25,194	30,000	-4,806	1,254,888			254,888	1,254,888

Interest expense	16,859		[$1,264,406 x 2% x 4/6 months]*
Bond premium	3,141		
Interest payable		20,000	[$1,000,000 x 4/12 months x 6%]*

Interest payable	30,000		
Cash		30,000	[$20k accrued above + $10k accrued at 31 July 2013]

* 4 months because 2 months [31/May/2013 to 31/July/2013] interest would have been accrued on 31 July 2013, the accounting year-end.

Question 3 (33 marks) (continued)

PART 3: (12 marks)

On 1/1/2011 Grexit Inc. issued a 6 year 8% $1,000,000 bond payable to Ottawa-Bank. Interest payment dates are June 30 and December 31 and the bonds were issued to provide an annual yield of 10%. By December 2012 Grexit Inc. is in financial difficulties and is about to miss the 31/12/2012 interest payment. Grexit Inc. negotiates an agreement with Ottawa-Bank whereby Ottawa-Bank agrees to waive the 31/12/2012 interest payment and to replace, effective 31/12/2012, the above bond with an 8 year $750,000 bond bearing 12% annual interest. Due to Grexit Inc.'s precarious situation, lenders would normally seek an annual 18% return on this 'bail-out' financing.

Required

Prepare the journal entry that Grexit Inc. would make for the restructuring that is described. Your analysis should follow the three steps discussed in your textbook and in class.

Solution

Step 1								
PV of the 6 year bond at 31/12/2012, using the old bond's 10% annual historic yield:								
PVA, 8 periods, 5%, $40,000		$ 40,000	5.00%	8	6.463212759	$258,529		
PV, 8 periods, 5%, $1,000,000		$ 1,000,000	5.00%	8	0.676839362	676,839		
						935,368		
31/12/2012 interest payment						40,000		
PV of old debt owed at 31/12/2012, using the old bond's 10% annual historic yield:						$975,368		
PV of the new 8 year bond at 31/12/2012, using the old bond's 10% historic yield:							If annual interest payments	
PVA, 16 periods, 5%, $45,000		$ 45,000	5.00%	16	10.837769560	$487,700	5.334926198	$480,143
PV, 16 periods, 5%, $750,000		$ 750,000	5.00%	16	0.458111522	343,584	0.466507380	349,881
PV of new debt at 31/12/2012, using the old bond's 10% annual historic yield:						$831,283		$830,024
Step 2								
Difference ($975,368 - $831,283).						$144,085		$145,344
Difference as a percentage of $975,368						14.77%		14.90%
Greater than 10% and thus this is a 'settlement' and the old bond is derecognized.								
Step 3								
As this is a 'settlement' calculate the PV of the new bond using the prevailing 18% required rate of return for bonds with similar risk and maturity.								
If you assume the new bonds' interest is paid semi-annually:								
PV of the new 8 year bond at 31/12/2012,using the prevailing rate of return for bonds with similar risk and maturity:								
PVA, 16 periods, 9%, $45,000		$ 45,000	9.00%	16	8.312558193	$374,065		
PV, 16 periods, 9%, $750,000		$ 750,000	9.00%	16	0.251869763	188,902		
PV of new debt at 31/12/2012, using the prevailing 18% required rate of return for bonds with similar risk and maturity.						$562,967		
Face value of the new 8 year bond:						750,000		
Therefore, bond discount is:						$187,033		
31/12/2012 J/E to record the bond restructuring								
(Old) Bond payable					1,000,000			
	(Old) Bond discount					64,632	[=$1,000,000 - $935,368 (PV of the 6 year bond at 31/12/2012, using the old bond's 10% annual historic yield:)].	
Interest payable					40,000			
(New) Bond discount					187,033			
	(New) Bond payable					750,000		
	Gain on bond restructuring					412,400		
If you assume the new bonds' interest is paid annually:								
PV of the new 8 year bond at 31/12/2012,using the prevailing rate of return for bonds with similar risk and maturity:								
PVA, 8 periods, 18%, $90,000		$ 90,000	18.00%	8	4.077565757	$366,981		
PV, 8 periods, 18%, $750,000		$ 750,000	18.00%	8	0.266038164	199,529		
PV of new debt at 31/12/2012, using the prevailing 18% required rate of return for bonds with similar risk						$566,510		
Face value of the new 8 year bond:						750,000		
Therefore, bond discount is:						$183,490		
31/12/2012 J/E to record the bond restructuring								
(Old) Bond payable					1,000,000			
	(Old) Bond discount					64,632	[=$1,000,000 - $935,368 (PV of the 6 year bond at 31/12/2012, using the old bond's 10% annual historic yield:)].	
Interest payable					40,000			
(New) Bond discount					183,490			
	(New) Bond payable					750,000		
	Gain on bond restructuring					408,858		

QUESTION 4 (16 marks)

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

PART 1: (7 marks)

McNamara Limited's ledger shows the following balances on December 31, 2012:

Preferred shares outstanding:	25,000 shares	$625,000
Common shares outstanding:	40,000 shares	3,000,000
Retained earnings		890,000

Required

Assuming that the directors decide to declare total dividends in the amount of $445,000, determine how much each class of shares should receive under each of the conditions that follow. Note that one year's dividends are in arrears on the preferred shares, which pay a dividend of $1.50 per share.

a) The preferred shares are cumulative and fully participating.
b) The preferred shares are non-cumulative and non-participating.
c) The preferred shares are non-cumulative and are participating in distributions in excess of a 10% dividend rate on the common shares.

Solution

		Preferred	Common	Total
(a)	One year in arrears*	$ 37,500		$ 37,500
	Current year**	37,500	$180,000	217,500
				255,000
	Participating (5.2414%***)	32,758	157,242	190,000
		$107,758	$337,242	$445,000

* 25,000 X $1.50 = $37,500

** Pro rata share to common:
$3,000,000 X 6%**** = $180,000

*** $\left(\frac{\$445,000 - \$255,000}{\$3,625,000}\right) = 5.2414\%$

**** Dividend rate per share for preferred shares is 6% calculated:
[$1.50 ÷ ($625,000 ÷ 25,000 shares)]

(b)		$37,500	$407,500	$445,000
(c)	Current year	$37,500	$180,000	$217,500
	Additional 4%** to common		120,000	120,000
				337,500
	Participating (2.9655%*)	18,535	88,965	107,500
		$56,035	$388,965	$445,000

* $\left(\frac{\$445,000 - \$337,500}{\$3,625,000}\right) = 2.9655\%$

**Dividend rate on common shares	10%
Less: matching amount ($37,500 / $625,000)	(6%)
Additional rate to common shares	4%

Question 4 (16 marks) (continued)

PART 2: (9 marks)

The following are selected transactions that may affect shareholders' equity.

1.	Recorded accrued interest earned on a note receivable.
2	Declared a cash dividend.
3.	Effected a stock split.
4.	Recorded the expiration of insurance coverage that was previously recorded as prepaid insurance.
5.	Paid the cash dividend declared in item 2 above.
6.	Recorded accrued interest expense on a note payable.
7.	Recorded an increase in the fair value of an investment accounted for using fair value through other comprehensive income (FV-OCI) with recycling that will be distributed as a property dividend. The carrying amount of the FV-OCI investment was greater than its cost. The shares are traded in an active market.
8.	Declared a property dividend (see item 7 above).
9.	Distributed the investment to shareholders (see items 7 and 8 above).
10.	Declared a stock dividend.
11.	Distributed the stock dividend declared in item 10.
12.	For the first time since its incorporation the company repurchased common shares for less than their carrying (book) value.

Required

In the table below, assuming the company follows IFRS, indicate the effect that each of the 12 transactions has on the financial statement elements that are listed. Use the following codes: increase (I), decrease (D) and do not enter anything (leave the cell blank) if there is no effect.

Item	Assets	Liabilities	Shareholders' Equity	Share Capital	Contributed Surplus	Retained Earnings	Accumulated Other Comprehensive Income	Net Income
1.								
2								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								

Solution

Item	Assets	Liabilities	Share-holders' Equity	Share Capital	Cont. Surplus	Retained Earnings	Acc. Other Compre-hensive Income	Net Income
1.	I	NE	I	NE	NE	I	NE	I
2.	NE	I	D	NE	NE	D	NE	NE
3.	NE	NE	NE	NE	NE	NE	NE	NE
4.	D	NE	D	NE	NE	D	NE	D
5.	D	D		NE	NE	NE	NE	NE

6.	NE	**I**	**D**	NE	NE	**D**	NE	**D**
7.	**I**	NE	**I**	NE	NE	NE	**I**	NE
8.	NE	**I**	**D**	NE	NE	**D**	NE	NE
9.	**D**	**D**	NE	NE	NE	**I***	**D**	**I***
10.	NE	NE	NE	**I**	NE	**D**	NE	NE
11.	NE	NE	NE	NE	NE	NE	NE	NE
12.	**D**	NE	**D**	**D**	**I**	NE	NE	NE

I = increase ; NE = no effect ; D = decrease

* this solution assumes *FV/OCI with recycling through net income*.

QUESTION 5 (13 marks)

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

PART 1: (7 marks)

On April 1, 2012, Tendulkar Ltd. paid $150 for a call to buy 500 shares of Tillakaratne Inc. at a strike price of $25 per share any time during the next six months. The market price of Tillakaratne's shares was $20 per share on April 1, 2012. On June 30, 2012, the market price for Tillakaratne's stock was $35 per share, and the value of the option was $6,700. Tendulkar exercised the call option and took delivery of the shares as soon as the market opened on July 1, 2012.

Required
Prepare any journal entries necessary on:
- April 1, 2012;
- June 30, 2012;
- July 1, 2012.

Solution

(i)	April 1, 2012		
Derivatives – Trading		150	
Cash			150
(ii)	June 30, 2012		
Derivatives – Trading		6,550	
Gain			6,550
($6,700 – $150)			
(iii)	July 1, 2012		
Investment (500 X $35)		17,500	
Loss		1,700	
Cash (500 X $25)			12,500
Derivative - Trading			6,700

PART 2: (6 marks)

On January 1, 2012, King of Fruits Ltd. entered into a purchase commitment contract to buy 10,000 durians from Java Exporters Inc, an Indonesian supplier, at a price of $0.50 per durian anytime during the next year. The contract provides King of Fruits with the option either to take delivery of the durians at any time over the next year, or to settle the contract on a net basis for the difference between the agreed upon price of $0.50 per durian and the market price per durian for any durians that have not been delivered. As at January 31, 2012, King of Fruits Ltd. did not take delivery of any durians, and the market price for a durian was $0.52.

Required
a) Assuming that IFRS are adopted, how should King of Fruits Ltd. account for this purchase agreement if it fully intends to take delivery of all 10,000 durians over the next year? Provide any journal entries necessary at (i) January 1 and (ii) January 31.

b) How would your answer to part (a) change if King of Fruits Ltd. did not intend to take delivery of the durians? Provide any journal entries necessary at (i) January 1 and (ii) January 31.

c) Assuming that ASPE is adopted, how would King of Fruits Ltd. account for this purchase agreement if it fully intends to take delivery of all 10,000 durians over the next year?

Solution

a) Under IFRS, this purchase commitment is an executory contract that can be settled on a net basis by paying cash as opposed to taking delivery of the durians. However, because King of Fruits Ltd. fully intends to take delivery of the durians, the contract is designated as 'expected use' and not

accounted for as a derivative; rather, the contract is not recognized until delivery of the durians takes place.

Therefore, there are no journal entries required at either January 1 or January 31. A journal entry will be recorded when King of Fruits actually takes delivery of the durians.

b) If King of Fruits Ltd. does not intend to take delivery of the durians, then the executory contract will be viewed as a derivative because it can be settled on a net basis. Therefore, the contract would be recorded at fair value.
Because there was no cost to enter into the contract, there would be no initial entry on January 1.
However, the contract will be marked to market and will change as the price of durians change. Therefore the following journal entry will take place on January 31:

Derivative – Durians.....	200	
Gain [10,000 X (0.52 – 0.50)]		200

c) Under ASPE, this purchase commitment contract is designated as "*expected use*", the contract is designated as 'expected use' and not accounted for as a derivative; rather, the contract is not recognized until delivery of the durians takes place.

Financial Tables

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

Period /Percent	0.50%	1.00%	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
1	0.995025	0.990099	0.985222	0.980392	0.975610	0.970874	0.966184	0.961538	0.956938	0.952381	0.947867	0.943396	0.938967	0.934579	0.930233	0.925926	0.921659	0.917431	0.913242	0.909091
2	0.990075	0.980296	0.970662	0.961169	0.951814	0.942596	0.933511	0.924556	0.915730	0.907029	0.898452	0.889996	0.881659	0.873439	0.865333	0.857339	0.849455	0.841680	0.834011	0.826446
3	0.985149	0.970590	0.956317	0.942322	0.928599	0.915142	0.901943	0.888996	0.876297	0.863838	0.851614	0.839619	0.827849	0.816298	0.804961	0.793832	0.782908	0.772183	0.761654	0.751315
4	0.980248	0.960980	0.942184	0.923845	0.905951	0.888487	0.871442	0.854804	0.838561	0.822702	0.807217	0.792094	0.777323	0.762895	0.748801	0.735030	0.721574	0.708425	0.695574	0.683013
5	0.975371	0.951466	0.928260	0.905731	0.883854	0.862609	0.841973	0.821927	0.802451	0.783526	0.765134	0.747258	0.729881	0.712986	0.696559	0.680583	0.665045	0.649931	0.635228	0.620921
6	0.970518	0.942045	0.914542	0.887971	0.862297	0.837484	0.813501	0.790315	0.767896	0.746215	0.725246	0.704961	0.685334	0.666342	0.647962	0.630170	0.612945	0.596267	0.580117	0.564474
7	0.965690	0.932718	0.901027	0.870560	0.841265	0.813092	0.785991	0.759918	0.734828	0.710681	0.687437	0.665057	0.643506	0.622750	0.602755	0.583490	0.564926	0.547034	0.529787	0.513158
8	0.960885	0.923483	0.887711	0.853490	0.820747	0.789409	0.759412	0.730690	0.703185	0.676839	0.651599	0.627412	0.604231	0.582009	0.560702	0.540269	0.520669	0.501866	0.483824	0.466507
9	0.956105	0.914340	0.874592	0.836755	0.800728	0.766417	0.733731	0.702587	0.672904	0.644609	0.617629	0.591898	0.567353	0.543934	0.521583	0.500249	0.479880	0.460428	0.441848	0.424098
10	0.951348	0.905287	0.861667	0.820348	0.781198	0.744094	0.708919	0.675564	0.643928	0.613913	0.585431	0.558395	0.532726	0.508349	0.485194	0.463193	0.442285	0.422411	0.403514	0.385543
11	0.946615	0.896324	0.848933	0.804263	0.762145	0.722421	0.684946	0.649581	0.616199	0.584679	0.554911	0.526788	0.500212	0.475093	0.451343	0.428883	0.407636	0.387533	0.368506	0.350494
12	0.941905	0.887449	0.836387	0.788493	0.743556	0.701380	0.661783	0.624597	0.589664	0.556837	0.525982	0.496969	0.469683	0.444012	0.419854	0.397114	0.375702	0.355535	0.336535	0.318631
13	0.937219	0.878663	0.824027	0.773033	0.725420	0.680951	0.639404	0.600574	0.564272	0.530321	0.498561	0.468839	0.441017	0.414964	0.390562	0.367698	0.346269	0.326179	0.307338	0.289664
14	0.932556	0.869963	0.811849	0.757875	0.707727	0.661118	0.617782	0.577475	0.539973	0.505068	0.472569	0.442301	0.414100	0.387817	0.363313	0.340461	0.319142	0.299246	0.280674	0.263331
15	0.927917	0.861349	0.799852	0.743015	0.690466	0.641862	0.596891	0.555265	0.516720	0.481017	0.447933	0.417265	0.388827	0.362446	0.337966	0.315242	0.294140	0.274538	0.256323	0.239392
16	0.923300	0.852821	0.788031	0.728446	0.673625	0.623167	0.576706	0.533908	0.494469	0.458112	0.424581	0.393646	0.365095	0.338735	0.314387	0.291890	0.271097	0.251870	0.234085	0.217629
17	0.918707	0.844377	0.776385	0.714163	0.657195	0.605016	0.557204	0.513373	0.473176	0.436297	0.402447	0.371364	0.342813	0.316574	0.292453	0.270269	0.249859	0.231073	0.213777	0.197845
18	0.914136	0.836017	0.764912	0.700159	0.641166	0.587395	0.538361	0.493628	0.452800	0.415521	0.381466	0.350344	0.321890	0.295864	0.272049	0.250249	0.230285	0.211994	0.195230	0.179859
19	0.909588	0.827740	0.753607	0.686431	0.625528	0.570286	0.520156	0.474642	0.433302	0.395734	0.361579	0.330513	0.302244	0.276508	0.253069	0.231712	0.212244	0.194490	0.178292	0.163508
20	0.905063	0.819544	0.742470	0.672971	0.610271	0.553676	0.502566	0.456387	0.414643	0.376889	0.342729	0.311805	0.283797	0.258419	0.235413	0.214548	0.195616	0.178431	0.162824	0.148644
21	0.900560	0.811430	0.731498	0.659776	0.595386	0.537549	0.485571	0.438834	0.396787	0.358942	0.324862	0.294155	0.266476	0.241513	0.218989	0.198656	0.180292	0.163698	0.148697	0.135131
22	0.896080	0.803396	0.720688	0.646839	0.580865	0.521893	0.469151	0.421955	0.379701	0.341850	0.307926	0.277505	0.250212	0.225713	0.203711	0.183941	0.166167	0.150182	0.135797	0.122846
23	0.891622	0.795442	0.710037	0.634156	0.566697	0.506692	0.453286	0.405726	0.363350	0.325571	0.291873	0.261797	0.234941	0.210947	0.189498	0.170315	0.153150	0.137781	0.124015	0.111678
24	0.887186	0.787566	0.699544	0.621721	0.552875	0.491934	0.437957	0.390121	0.347703	0.310068	0.276657	0.246979	0.220602	0.197147	0.176277	0.157699	0.141152	0.126405	0.113256	0.101526
25	0.882772	0.779768	0.689206	0.609531	0.539391	0.477606	0.423147	0.375117	0.332731	0.295303	0.262234	0.232999	0.207138	0.184249	0.163979	0.146018	0.130094	0.115968	0.103430	0.092296
26	0.878380	0.772048	0.679021	0.597579	0.526235	0.463695	0.408838	0.360689	0.318402	0.281241	0.248563	0.219810	0.194496	0.172195	0.152539	0.135202	0.119902	0.106393	0.094457	0.083905
27	0.874010	0.764404	0.668986	0.585862	0.513400	0.450189	0.395012	0.346817	0.304691	0.267848	0.235605	0.207368	0.182625	0.160930	0.141896	0.125187	0.110509	0.097608	0.086262	0.076278
28	0.869662	0.756836	0.659099	0.574375	0.500878	0.437077	0.381654	0.333477	0.291571	0.255094	0.223322	0.195630	0.171479	0.150402	0.131997	0.115914	0.101851	0.089548	0.078778	0.069343
29	0.865335	0.749342	0.649359	0.563112	0.488661	0.424346	0.368748	0.320651	0.279015	0.242946	0.211679	0.184557	0.161013	0.140563	0.122788	0.107328	0.093872	0.082155	0.071943	0.063039
30	0.861030	0.741923	0.639762	0.552071	0.476743	0.411987	0.356278	0.308319	0.267000	0.231377	0.200644	0.174110	0.151186	0.131367	0.114221	0.099377	0.086518	0.075371	0.065702	0.057309
31	0.856746	0.734577	0.630308	0.541246	0.465115	0.399987	0.344230	0.296460	0.255502	0.220359	0.190184	0.164255	0.141959	0.122773	0.106252	0.092016	0.079740	0.069148	0.060002	0.052099
32	0.852484	0.727304	0.620993	0.530633	0.453771	0.388337	0.332590	0.285058	0.244500	0.209866	0.180269	0.154957	0.133295	0.114741	0.098839	0.085200	0.073493	0.063438	0.054796	0.047362
33	0.848242	0.720103	0.611816	0.520229	0.442703	0.377026	0.321343	0.274094	0.233971	0.199873	0.170871	0.146186	0.125159	0.107235	0.091943	0.078889	0.067736	0.058200	0.050042	0.043057
34	0.844022	0.712973	0.602774	0.510028	0.431905	0.366045	0.310476	0.263552	0.223896	0.190355	0.161963	0.137912	0.117520	0.100219	0.085529	0.073045	0.062429	0.053395	0.045700	0.039143
35	0.839823	0.705914	0.593866	0.500028	0.421371	0.355383	0.299977	0.253415	0.214254	0.181290	0.153520	0.130105	0.110348	0.093663	0.079562	0.067635	0.057539	0.048986	0.041736	0.035584
36	0.835645	0.698925	0.585090	0.490223	0.411094	0.345032	0.289833	0.243669	0.205028	0.172657	0.145516	0.122741	0.103613	0.087535	0.074011	0.062625	0.053031	0.044941	0.038115	0.032349
37	0.831487	0.692005	0.576443	0.480611	0.401067	0.334983	0.280032	0.234297	0.196199	0.164436	0.137930	0.115793	0.097289	0.081809	0.068847	0.057986	0.048876	0.041231	0.034808	0.029408
38	0.827351	0.685153	0.567924	0.471187	0.391285	0.325226	0.270562	0.225285	0.187750	0.156605	0.130739	0.109239	0.091351	0.076457	0.064044	0.053690	0.045047	0.037826	0.031788	0.026735
39	0.823235	0.678370	0.559531	0.461948	0.381741	0.315754	0.261413	0.216621	0.179665	0.149148	0.123924	0.103056	0.085776	0.071455	0.059576	0.049713	0.041518	0.034703	0.029030	0.024304
40	0.819139	0.671653	0.551262	0.452890	0.372431	0.306557	0.252572	0.208289	0.171929	0.142046	0.117463	0.097222	0.080541	0.066780	0.055419	0.046031	0.038266	0.031838	0.026512	0.022095

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

Period/ Percent	0.50%	1.00%	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
1	0.995025	0.990099	0.985222	0.980392	0.975610	0.970874	0.966184	0.961538	0.956938	0.952381	0.947867	0.943396	0.938967	0.934579	0.930233	0.925926	0.921659	0.917431	0.913242	0.909091
2	1.985099	1.970395	1.955883	1.941561	1.927424	1.913470	1.899694	1.886095	1.872668	1.859410	1.846320	1.833393	1.820626	1.808018	1.795565	1.783265	1.771114	1.759111	1.747253	1.735537
3	2.970248	2.940985	2.912200	2.883883	2.856024	2.828611	2.801637	2.775091	2.748964	2.723248	2.697933	2.673012	2.648476	2.624316	2.600526	2.577097	2.554022	2.531295	2.508907	2.486852
4	3.950496	3.901966	3.854385	3.807729	3.761974	3.717098	3.673079	3.629895	3.587526	3.545951	3.505150	3.465106	3.425799	3.387211	3.349326	3.312127	3.275597	3.239720	3.204481	3.169865
5	4.925866	4.853431	4.782645	4.713460	4.645828	4.579707	4.515052	4.451822	4.389977	4.329477	4.270284	4.212364	4.155679	4.100197	4.045885	3.992710	3.940642	3.889651	3.839709	3.790787
6	5.896384	5.795476	5.697187	5.601431	5.508125	5.417191	5.328553	5.242137	5.157872	5.075692	4.995530	4.917324	4.841014	4.766540	4.693846	4.622880	4.553587	4.485919	4.419825	4.355261
7	6.862074	6.728195	6.598214	6.471991	6.349391	6.230283	6.114544	6.002055	5.892701	5.786373	5.682967	5.582381	5.484520	5.389289	5.296601	5.206370	5.118514	5.032953	4.949612	4.868419
8	7.822959	7.651678	7.485925	7.325481	7.170137	7.019692	6.873956	6.732745	6.595886	6.463213	6.334566	6.209794	6.088751	5.971299	5.857304	5.746639	5.639183	5.534819	5.433436	5.334926
9	8.779064	8.566018	8.360517	8.162237	7.970866	7.786109	7.607687	7.435332	7.268790	7.107822	6.952195	6.801692	6.656104	6.515232	6.378887	6.246888	6.119063	5.995247	5.875284	5.759024
10	9.730412	9.471305	9.222185	8.982585	8.752064	8.530203	8.316605	8.110896	7.912718	7.721735	7.537626	7.360087	7.188830	7.023582	6.864081	6.710081	6.561348	6.417658	6.278798	6.144567
11	10.677027	10.367628	10.071118	9.786848	9.514209	9.252624	9.001551	8.760477	8.528917	8.306414	8.092536	7.886875	7.689042	7.498674	7.315424	7.138964	6.968984	6.805191	6.647304	6.495061
12	11.618932	11.255077	10.907505	10.575341	10.257765	9.954004	9.663334	9.385074	9.118581	8.863252	8.618518	8.383844	8.158725	7.942686	7.735278	7.536078	7.344686	7.160725	6.983839	6.813692
13	12.556151	12.133740	11.731532	11.348374	10.983185	10.634955	10.302738	9.985648	9.682852	9.393573	9.117079	8.852683	8.599742	8.357651	8.125840	7.903776	7.690955	7.486904	7.291178	7.103356
14	13.488708	13.003703	12.543382	12.106249	11.690912	11.296073	10.920520	10.563123	10.222825	9.898641	9.589648	9.294984	9.013842	8.745468	8.489154	8.244237	8.010097	7.786150	7.571852	7.366687
15	14.416625	13.865053	13.343233	12.849264	12.381378	11.937935	11.517411	11.118387	10.739546	10.379658	10.037581	9.712249	9.402669	9.107914	8.827120	8.559479	8.304237	8.060688	7.828175	7.606080
16	15.339925	14.717874	14.131264	13.577709	13.055003	12.561102	12.094117	11.652296	11.234015	10.837770	10.462162	10.105895	9.767764	9.446649	9.141507	8.851369	8.575333	8.312558	8.062260	7.823709
17	16.258632	15.562251	14.907649	14.291872	13.712198	13.166118	12.651321	12.165669	11.707191	11.274066	10.864609	10.477260	10.110577	9.763223	9.433960	9.121638	8.825192	8.543631	8.276037	8.021553
18	17.172768	16.398269	15.672561	14.992031	14.353364	13.753513	13.189682	12.659297	12.159992	11.689587	11.246074	10.827603	10.432466	10.059087	9.706009	9.371887	9.055476	8.755625	8.471266	8.201412
19	18.082356	17.226008	16.426168	15.678462	14.978891	14.323799	13.709837	13.133939	12.593294	12.085321	11.607654	11.158116	10.734710	10.335595	9.959078	9.603599	9.267720	8.950115	8.649558	8.364920
20	18.987419	18.045553	17.168639	16.351433	15.589162	14.877475	14.212403	13.590326	13.007936	12.462210	11.950382	11.469921	11.018507	10.594014	10.194491	9.818147	9.463337	9.128546	8.812382	8.513564
21	19.887979	18.856983	17.900137	17.011209	16.184549	15.415024	14.697974	14.029160	13.404724	12.821153	12.275244	11.764077	11.284983	10.835527	10.413480	10.016803	9.643628	9.292244	8.961080	8.648694
22	20.784059	19.660379	18.620824	17.658048	16.765413	15.936917	15.167125	14.451115	13.784425	13.163003	12.583170	12.041582	11.535196	11.061240	10.617191	10.200744	9.809796	9.442425	9.096876	8.771540
23	21.675681	20.455821	19.330861	18.292204	17.332110	16.443608	15.620410	14.856842	14.147775	13.488574	12.875042	12.303379	11.770137	11.272187	10.806689	10.371059	9.962945	9.580207	9.220892	8.883218
24	22.562866	21.243387	20.030405	18.913926	17.884986	16.935542	16.058368	15.246963	14.495478	13.798642	13.151699	12.550358	11.990739	11.469334	10.982967	10.528758	10.104097	9.706612	9.334148	8.984744
25	23.445638	22.023156	20.719611	19.523456	18.424376	17.413148	16.481515	15.622080	14.828209	14.093945	13.413933	12.783356	12.197877	11.653583	11.146946	10.674776	10.234191	9.822580	9.437578	9.077040
26	24.324018	22.795204	21.398632	20.121036	18.950611	17.876842	16.890352	15.982769	15.146611	14.375185	13.662495	13.003166	12.392373	11.825779	11.299485	10.809978	10.354093	9.928972	9.532034	9.160945
27	25.198028	23.559608	22.067617	20.706898	19.464011	18.327031	17.285365	16.329586	15.451303	14.643034	13.898100	13.210534	12.574998	11.986709	11.441381	10.935165	10.464602	10.026580	9.618296	9.237223
28	26.067689	24.316443	22.726717	21.281272	19.964889	18.764108	17.667019	16.663063	15.742874	14.898127	14.121422	13.406164	12.746477	12.137111	11.573378	11.051078	10.566453	10.116128	9.697074	9.306567
29	26.933024	25.065785	23.376076	21.844385	20.453550	19.188455	18.035767	16.983715	16.021889	15.141074	14.333101	13.590721	12.907490	12.277674	11.696165	11.158406	10.660326	10.198283	9.769018	9.369606
30	27.794054	25.807708	24.015838	22.396456	20.930293	19.600441	18.392045	17.292033	16.288889	15.372451	14.533745	13.764831	13.058676	12.409041	11.810386	11.257783	10.746844	10.273654	9.834719	9.426914
31	28.650800	26.542285	24.646146	22.937702	21.395407	20.000428	18.736276	17.588494	16.544391	15.592811	14.723929	13.929086	13.200635	12.531814	11.916638	11.349799	10.826584	10.342802	9.894721	9.479013
32	29.503284	27.269589	25.267139	23.468335	21.849178	20.388766	19.068865	17.873551	16.788891	15.802677	14.904198	14.084043	13.333929	12.646555	12.015478	11.434999	10.900078	10.406240	9.949517	9.526376
33	30.351526	27.989693	25.878954	23.988564	22.291881	20.765792	19.390208	18.147646	17.022862	16.002549	15.075069	14.230230	13.459088	12.753790	12.107421	11.513888	10.967813	10.464441	9.999559	9.569432
34	31.195548	28.702666	26.481728	24.498592	22.723786	21.131837	19.700684	18.411198	17.246758	16.192904	15.237033	14.368141	13.576609	12.854009	12.192950	11.586934	11.030243	10.517835	10.045259	9.608575
35	32.035371	29.408580	27.075595	24.998619	23.145157	21.487220	20.000661	18.664613	17.461012	16.374194	15.390552	14.498246	13.686957	12.947672	12.272511	11.654568	11.087781	10.566821	10.086995	9.644159
36	32.871016	30.107505	27.660684	25.488842	23.556251	21.832252	20.290494	18.908282	17.666041	16.546852	15.536068	14.620987	13.790570	13.035208	12.346522	11.717193	11.140812	10.611763	10.125109	9.676508
37	33.702504	30.799510	28.237127	25.969453	23.957318	22.167235	20.570525	19.142579	17.862240	16.711287	15.673999	14.736780	13.887859	13.117017	12.415370	11.775179	11.189689	10.652993	10.159917	9.705917
38	34.529854	31.484663	28.805052	26.440641	24.348603	22.492462	20.841087	19.367864	18.049990	16.867893	15.804738	14.846019	13.979210	13.193473	12.479414	11.828869	11.234736	10.690820	10.191705	9.732651
39	35.353089	32.163033	29.364583	26.902589	24.730344	22.808215	21.102500	19.584485	18.229656	17.017041	15.928662	14.949075	14.064986	13.264928	12.538989	11.878582	11.276255	10.725523	10.220735	9.756956
40	36.172228	32.834686	29.915845	27.355479	25.102775	23.114772	21.355072	19.792774	18.401584	17.159086	16.046125	15.046297	14.145527	13.331709	12.594409	11.924613	11.314520	10.757360	10.247247	9.779051

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