

**ADM 2342**  
**(SECTIONS A AND B)**  
**Mid Term Exam**  
**Intermediate Financial Accounting 1**  
**2018 Fall Semester**  
**Solutions**

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NAME: \_\_\_\_\_ STUDENT #: \_\_\_\_\_

1. This examination comprises 7 questions over 20 pages. Page 18 is an extra page for rough work and any additional supporting calculations. The last two pages (pages 19 and 20) contain present value tables. Answer all questions directly in this booklet. The booklet is not to be removed from the examination room. You may separate the pages but ensure that you put them back together and staple them before handing in.
2. Limit your answer to the space provided. Blank sheets for rough work and supporting calculations are given at the end of each question. You must show, where appropriate, supporting calculations in order to get part marks.
3. This exam is out of 100 marks and is 3 hours long. You should budget approximately 2 minutes per mark.
4. Please do **not** ask the invigilator or the professor any questions, as they will **not** be answered. State reasonable assumptions, if you feel they are necessary.
5. Students may use either pen or pencil in writing this exam. However, if a student elects to use pencil, after the exam has been marked and returned to the student, the exam cannot be re-submitted for review.
6. Language dictionaries (non-electronic) are allowed if the invigilator permits them. They must be shown to the invigilator before the start of the exam.
7. The use of electronic communication devices such as cell phones is strictly prohibited during the exam.
8. You **must** sign the Statement of Academic integrity on page 2 of this exam.

| Question     |  | Marks              |
|--------------|--|--------------------|
| 1            | <b>The Canadian Financial Reporting Environment</b>          | /5                 |
| 2            | <b>Reporting Financial Performance</b>                       | /20                |
| 3            | <b>Conceptual Framework Underlying Financial Reporting</b>   | /10                |
| 4            | <b>The Accounting Information System – Adjusting Entries</b> | /12                |
| 5            | <b>Cash Flow Statement</b>                                   | /16                |
| 6            | <b>Revenue Recognition</b>                                   | /20                |
| 7            | <b>Cash and Receivables</b>                                  | /17                |
| <b>TOTAL</b> |  | <b><u>/100</u></b> |

**Statement of Academic Integrity**

The Telfer School of Management does not condone academic fraud, an act by a student that may result in a false academic evaluation of that student or of another student.

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

**Statement to be signed by the student:**

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

Signed: \_\_\_\_\_

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

**Question No. 1 (5 marks)**

Write a 100-word essay in which you explain the role that professional judgement plays in applying GAAPs under the Canadian conceptual framework.

Answer:

- *Professional Judgement plays an especially important role in ASPE and IFRS.*
- *It is important where standards are based primarily on general principles rather than specific rules.*
- *It is used in conjunction with the conceptual framework in the absence of specific standards.*
- *There cannot be a rule for every situation.*
- *Standards in Canada are based primarily on principles rather than specific rules; therefore, accountants must use professional judgement.*
- *The United States currently uses a rules-based approach; therefore, professional judgement is less crucial.*

**Question No. 2 (20 marks)**

Pluto Company is an international public company with a December 31 year-end. The company started operations on January 1, 2014. During its first three years of operations, Pluto reported net income, other comprehensive income, and declared dividends as follows:

|      | Net income/(loss) | Dividends declared | Other Comprehensive Income (net of tax) |
|------|-------------------|--------------------|---|
| 2014 | \$ (50,000)       | \$ -0-             | \$ -0-                                  |
| 2015 | 60,000            | 6,000              | 14,000                                  |
| 2016 | 51,000            | 5,000              | 8,000                                   |

Presented below is Pluto's post-closing trial balance for the year ended December 31, 2017. Each item has a normal debit or credit balance. Pluto uses a tax rate of 40% on all applicable items. All gains and losses presented in the trial balance are shown as pre-tax amounts.

In early 2017, the company's Board of Directors adopted a plan to discontinue the operations of the Greene Division. The Greene Division qualified to be reported as a discontinued operation and, in late November 2017, the division was successfully sold off.

Pluto Company  
Post-Closing Trial Balance  
As at December 31, 2017

|  |         |
|--|---------|
| Accounts receivable (net of allowance for doubtful accounts)               | 110,000 |
| Prepaid expenses   | 45,000  |
| Equipment (net of accumulated depreciation)                                | 60,000  |
| Accounts payable   | 65,000  |
| Land   | 90,000  |
| Gain on the remeasurement of FV-OCI investments - OCI                      | 30,000  |
| Common shares, December 31, 2017 <sup>1</sup>                              | 80,000  |
| Unearned revenue   | 12,000  |
| Loss from translating the financial statements of foreign operations - OCI | 25,000  |
| Retained earnings, January 1 2017  | 50,000  |
| Loss on operations of discontinued operations of the Greene Division       | 30,000  |
| Bonds payable, due January 1, 2023   | 112,000 |
| Cash   | 42,000  |
| Correction of error <sup>2</sup>   | 25,000  |
| Gain on remeasurement of defined benefit pension plan - OCI                | 45,000  |
| Dividends declared but not paid  | 7,000   |
| Gain on disposal of the Greene Division                                    | 5,000   |
| Income Summary   | ?       |

<sup>1</sup> A total of 1,000 common shares were issued on March 31, 2017 and 2,000 common shares were issued on November 30, 2017. The average issuance price during the year was \$5.00 per share.

<sup>2</sup> During 2016, a patent owned by Pluto and that had a carrying value of \$25,000 had expired. The company wrote down the patent to zero but mistakenly did not record the write down until March 2017.

**Required:**

Prepare, in proper format, a Statement of Changes in Equity for Pluto Corporation for the year ended December 31, 2017. It is not necessary to include a totals column in your statement.

**Question No. 2 (continued) (20 marks)**

*Answer: (assuming a \$50,000 beginning retained earnings balance on January 1, 2017)*

| <i>Pluto Company<br/>Statement of Changes in Equity<br/>For the year ended December 31, 2017</i> |                          |                 |                              |
|--|--------------------------|-----------------|------------------------------|
|  | <b>Common<br/>Shares</b> | <b>AOCI</b>     | <b>Retained<br/>Earnings</b> |
| <i>Opening Balance, January 1, 2017 *</i>  | \$65,000                 | \$22,000        | <b>\$50,000</b>              |
| <i>Correction of error (\$25,000 x 60% - net of tax)</i>   |                          |                 | <i>(15,000)</i>              |
| <i>Balance, January 1, 2017 restated</i>   |                          |                 | 35,000                       |
| <i>Issuance of Common Shares – March 31, 2017</i>  | 5,000                    |                 |                              |
| <i>Issuance of Common Shares – November 30, 2017</i>   | 10,000                   |                 |                              |
| <i>Other comprehensive income (net of tax) ****</i>  |                          |                 |                              |
| <i>-remeasurement of FV-OCI investments;</i>   |                          | 18,000          |                              |
| <i>-translation of financial statements of foreign operations</i>                                |                          | <i>(15,000)</i> |                              |
| <i>-remeasurement of defined benefit pension plan;</i>   |                          | 27,000          |                              |
| <i>Dividends declared</i>  |                          |                 | <i>(7,000)</i>               |
| <i>Net income/(loss) ***</i>   |                          |                 | <i>(2,000)</i>               |
| <i>Ending Balance, Dec. 31, 2017 **</i>  | <u>\$80,000</u>          | <u>52,000</u>   | <u>\$ 26,000</u>             |

\* *The opening balance for common shares has to be derived working backwards. Since the ending balance is \$80,000 and since there were \$5,000 and \$10,000 of share issuances during the year (March 31 and November 30), the balance on January 1 must have been \$65,000.*

*The beginning balance of RE is the amount shown in the post-closing trial balance: \$50,000. Data concerning previous years' incomes/losses and dividends are ignored.*

\*\* *The ending balance in retained earnings on December 31, 2017 must be \$26,000. This amount is derived by solving the basic accounting equation as follows:  
Assets = Liabilities + Shareholders Equity (see supporting calculation below).  
Therefore: \$347,000 = \$189,000 + [\$80,000 + (retained earnings) + \$52,000]*

\*\*\* *The 2017 net loss of \$2,000 is derived as follows: \$35,000 BRE (ADJ) - \$7,000 DIV - \$26,000 ERE = \$2,000 net loss*

\*\*\*\* *All OCI items are shown net of tax to comply with intraperiod tax allocation.*

| <i>Pluto Company - Supporting Calculation for Ending Retained Earnings Balance</i>                      |                          |
|---|--------------------------|
| <b>Assets</b>   |                          |
| <i>Current: Cash (\$42,000) + Accounts receivable net (\$110,000) +<br/>Prepaid expenses (\$45,000)</i> | \$ 197,000               |
| <i>Non-Current: Land (\$90,000) + Equipment net (\$60,000)</i>  | <u>150,000</u>           |
| <b>Total Assets</b>   | <b>\$ <u>347,000</u></b> |
| <b>Liabilities</b>  |                          |
| <i>Current: Accounts payable (\$65,000) + Unearned revenue (\$12,000)</i>                               | 77,000                   |
| <i>Non-current liabilities: Bonds payable (\$112,000)</i>   | <u>112,000</u>           |
| <b>Total Liabilities</b>  | <b>\$ 189,000</b>        |
| <b>Shareholders Equity</b>  |                          |
| <i>Common shares</i>  | 80,000                   |
| <i>Accumulated other comprehensive income on AFS investments</i>  | 52,000                   |
| <i>Retained earnings (by plug)</i>  | <u>26,000</u>            |
| <b>Total Shareholders Equity</b>  | <b>\$ 158,000</b>        |
| <b>Total Liabilities and Shareholders Equity</b>  | <b>\$ <u>347,000</u></b> |

**Question No. 2 (continued) (20 marks)**

Answer: (assuming a \$25,000 beginning retained earnings balance on January 1, 2017)

| <i>Pluto Company</i><br><i>Statement of Changes in Equity</i><br><i>For the year ended December 31, 2017</i> |                          |               |                              |
|--|--------------------------|---------------|------------------------------|
|  | <i>Common<br/>Shares</i> | <i>AOCI</i>   | <i>Retained<br/>Earnings</i> |
| <i>Opening Balance, January 1, 2017 *</i>  | \$65,000                 | \$22,000      | <b>\$ 25,000</b>             |
| <i>Correction of error (\$25,000 x 60% - net of tax)</i>   |                          |               | (15,000)                     |
| <i>Balance, January 1, 2017 restated</i>   |                          |               | 10,000                       |
| <i>Issuance of Common Shares – March 31, 2017</i>  | 5,000                    |               |                              |
| <i>Issuance of Common Shares – November 30, 2017</i>   | 10,000                   |               |                              |
| <i>Other comprehensive income (net of tax) ****</i>  |                          |               |                              |
| <i>-remeasurement of FV-OCI investments;</i>   |                          | 18,000        |                              |
| <i>-translation of financial statements of foreign operations</i>  |                          | (15,000)      |                              |
| <i>-remeasurement of defined benefit pension plan;</i>   |                          | 27,000        |                              |
| <i>Dividends declared</i>  |                          |               | (7,000)                      |
| <i>Net income/(loss) ***</i>   |                          |               | <u>23,000</u>                |
| <i>Ending Balance, Dec. 31, 2017 **</i>  | <u>\$80,000</u>          | <u>52,000</u> | <u>\$26,000</u>              |

\* The opening balance for common shares has to be derived working backwards. Since the ending balance is \$80,000 and since there were \$5,000 and \$10,000 of share issuances during the year (March 31 and November 30), the balance on January 1 must have been \$65,000.

The beginning balance of RE is the cumulative amount of incomes/losses over the first 3 years net of any dividends declared. Therefore: (\$50,000) + \$60,000 + \$26,000 - \$6,000 - \$5,000 = \$25,000. The post-closing trial balance figure is ignored.

\*\* The ending balance in retained earnings on December 31, 2017 must be \$26,000. This amount is derived by solving the basic accounting equation as follows:  
Assets = Liabilities + Shareholders Equity (see supporting calculation below).  
Therefore: \$347,000 = \$189,000 + [\$80,000 + (retained earnings) + \$52,000]

\*\*\* The 2017 net income of 23,000 is derived as follows; \$10,000 BRE (ADJ) - \$7,000 DIV - \$26,000 ERE = \$23,000 net income

\*\*\*\* All OCI items are shown net of tax to comply with intraperiod tax allocation.

| <i>Pluto Company - Supporting Calculation for Ending Retained Earnings Balance</i>                  |                          |
|---|--------------------------|
| <b>Assets</b>   |                          |
| <i>Current: Cash (\$42,000) + Accounts receivable net (\$110,000) + Prepaid expenses (\$45,000)</i> | \$ 197,000               |
| <i>Non-Current: Land (\$90,000) + Equipment net (\$60,000)</i>                                      | <u>150,000</u>           |
| <b>Total Assets</b>   | <b>\$ <u>347,000</u></b> |
| <b>Liabilities</b>  |                          |
| <i>Current: Accounts payable (\$65,000) + Unearned revenue (\$12,000)</i>                           | 77,000                   |
| <i>Non-current liabilities: Bonds payable (\$112,000)</i>   | <u>112,000</u>           |
| <b>Total Liabilities</b>  | <b>\$ <u>189,000</u></b> |
| <b>Shareholders Equity</b>  |                          |
| <i>Common shares</i>  | 80,000                   |
| <i>Accumulated other comprehensive income on AFS investments</i>                                    | 52,000                   |
| <i>Retained earnings (by plug)</i>  | <u>26,000</u>            |
| <b>Total Shareholders Equity</b>  | <b>\$ <u>158,000</u></b> |
| <b>Total Liabilities and Shareholders Equity</b>  | <b>\$ <u>347,000</u></b> |

### Question No. 3 (10 marks)

The second level of the Canadian conceptual framework presents the basic elements that are most directly related to measuring an enterprise's performance and its financial status.

#### Required:

For each of the following ten situations, identify the element(s) involved and assign an appropriate account title or name to each element you use. If you feel no element is to be recognized, state your reason.

1. An unpaid gas bill.
2. A patent on a new invention that has been created and registered but whose market value is yet not fully known.
3. Training courses taken by employees at the company's expense but which are unpaid.
4. Authorized but unissued common shares of a company that will likely be issued for cash next year.
5. A partially completed consulting project for a client.
6. The costs incurred from defending a lawsuit that has been lodged against the company. The company expects to incur up to an additional \$100,000 and it is more likely than not that the company expects to lose the lawsuit.
7. Customer goodwill as indicated by a high percentage of satisfied repeat customers.
8. A reputation for producing high-quality products.
9. Cash received from a customer for work to be done next year.
10. Merchandise received from a consignor.

#### Answer:

1. *An expense (Utilities expense) and a liability (account payable or utilities payable) must be recorded.*
2. *An intangible asset which would be recorded at cost. Due to market uncertainty, any fair market value cannot be disclosed.*
3. *An expense (employee training expense) and a liability (account payable) must be recorded*
4. *This item is not recorded as a financial statement element because no shares have been issued as yet, no proceeds have been received, and no contract exists.*
5. *An asset (work-in-process inventory) as cost of the work completed so far must be recorded.*
6. *A loss for the costs incurred and a credit to an asset (cash) representing the costs paid to date must be recorded. In addition, a provision for future losses up to \$100,000 will also need to be accrued as an additional loss and as a liability (future lawsuit payable).*
7. *This item is not recorded as a financial statement element because no there is no basis for measurement and the company has no control over the 'asset'.*
8. *This item is not recorded as a financial statement element because there is no reliable basis for measuring the future benefit.*
9. *Cash (an asset) and unearned revenue or deposits received in advance (a liability).*
10. *This item is not recorded as a financial statement element because inventory received from a consignor still belongs to the consignor and, therefore, does not belong to the consignee.*

**Question No. 4 (12 marks)**

The following six transactions occurred during 2017. Each transaction is independent. Assume a December 31 year-end.

- (a) Advertising expense was recorded in the amount of \$94,800. This amount included a payment of \$6,300 that represented an advertisement that will run in January next year.
- (b) There are two notes payables outstanding as at December 31. The first is an \$890,000, 4% note that was issued on September 1, 2017. No interest has been paid to date. The second is a \$700,000, 3.5% note issued on April 1, 2017. Six months' interest was paid on October 1. The notes payables themselves were properly recorded on their issuance dates but accrued interest has not been recorded to December 31.
- (c) Supplies inventory has a balance of 14,700 on December 31, 2016. During 2017, 53,500 of supplies were purchased and were debited directly to supplies expense. On December 31, 2017, an inventory count was conducted and the balance was ascertained to be \$19,600.
- (d) An office building was rented to a tenant for one year starting on September 1, 2017. Rent for one year was collected on that date in the amount of \$9,300. The total amount collected was credited to rent revenue.
- (e) A 6% note receivable dated November 1, 2017 was received from a customer. The note had a face value of \$15,000. The note is due in one year. On the maturity date, the amount of the note plus accrued interest will be collected.
- (f) Prepaid insurance had a debit balance of \$18,200 on January 1, 2017. This amount represented the remaining 14 months in an insurance policy that had been purchased in a prior year. On April 1, 2017, a 30-month policy was purchased for \$50,400. This amount was debited to prepaid insurance. There were no other entries to the prepaid insurance account during the year. On November 1, 2017, an 18-month policy was purchased for \$9,360. However, this amount was debited to insurance expense.

**Required:**

Prepare adjusting entries for each of the above transactions for December 31. Narrative explanations are not required. However, all supporting calculations must be shown.

Answer:

|     |   |        |        |
|-----|---|--------|--------|
| (a) | Prepaid advertising.....  | 6,300  |        |
|     | Advertising expense .....   |        | 6,300  |
| (b) | Interest expense .....  | 17,992 |        |
|     | Interest payable.....   |        | 17,992 |
|     | $[(\$890,000 \times .04) \times 4/12] + [\$700,000 \times .035] \times 3/12]$ |        |        |
|     | = \$11,867 + \$6,125 = \$17,992   |        |        |
| (c) | Supplies inventory .....  | 4,900  |        |
|     | Supplies expense.....   |        | 4,900  |
|     | (\$19,600 - \$14,700)   |        |        |
| (d) | Rent revenue.....   | 6,200  |        |
|     | Unearned revenue .....  |        | 6,200  |
|     | $\$9,300 \times 8/12 = \$6,200$   |        |        |
| (e) | Interest receivable.....  | 150    |        |
|     | Interest revenue.....   |        | 150    |
|     | $\$15,000 \times 6\% \times 2/12 = \$150$                                     |        |        |

**Question No. 4 (continued) (12 marks)**

|  |        |        |
|--|--------|--------|
| (f) <i>Insurance expense</i> .....   | 22,400 |        |
| <i>Prepaid insurance</i> .....   |        | 22,400 |
| $\$15,000 \times 6\% \times 28/12 = \$150$   |        |        |
| <i>Current balance:</i> $\$18,200 + \$50,400 = \$68,600$   |        |        |
| <i>Correct balance:</i> $(\$18,200 \times 2/14) + (\$50,400 \times 21/30) +$<br>$(\$9,360 \times 16/18) = \$2,600 + \$35,280 + \$8,320 = \$46,200$ |        |        |
| <i>Adjustment required</i> = $\$22,400$  |        |        |

**Question No. 5 (16 marks)**

Semper Corporation is a public company that started its first year of operations on January 1, 2017. Semper has a December 31 year-end.

Summarized below are the company's transactions for 2017:

1. Issued 40,000 common shares in total for \$50,000.
2. Sold 1,000 preferred shares at an average issuance price of \$20 per share.
3. Paid \$40,000 to acquire a vehicle to be used in the business.
4. Depreciation expense recorded for the year was \$8,000 (corrected).
5. Purchased \$200,000 inventory on account.
6. Recorded \$300,000 in sales on account; cost of goods sold was \$140,000.
7. Received \$190,000 from customers on sales made on account.
8. The opening and closing balances of the accumulated depreciation account (vehicle) were zero and \$8,000, respectively.
9. Paid \$40,000 cash to a supplier in partial settlement of the inventory purchased in transaction #5 above.
10. Paid \$20,000 to buy back common shares at their book value.
11. Sold the vehicle purchased in transaction #3 above and received \$32,000 cash.
12. Acquired land with a fair market value of \$80,000 through the issuance of 4-year, 6% bonds payable. The bonds were issued at par.
13. Declared and paid dividends totaling \$20,000. Semper has a policy of reporting dividends as a cash outflow from financing activities.
14. The recorded interest expense on the bonds payable for 2017 was \$6,000. No interest was accrued. Semper appropriately follows the policy of classifying transactions involving interest paid and interest received as an operating activity.
15. Paid \$100,000 for various administrative expenses.
16. Paid \$20,000 cash for income taxes. The amount of cash paid equaled the amount recorded for income tax expense.

**Required:**

Prepare, in proper format and with appropriate note disclosure, the Cash Flow Statement for Semper Corporation for the year ended December 31, 2017. Semper uses the indirect method.

Note:

Use page 12 of the midterm exam to show your final Cash Flow Statement. Use page 13 of the midterm exam for supporting calculations/T-accounts, etc.

**Question No. 5 (continued) (16 marks)**

Answer:

a.

| <i>Semper Corporation</i><br><i>Flow Statement</i><br><i>Year Ended December 31, 2017</i> |                 |                 |
|---|-----------------|-----------------|
| <b><i>Cash flows from operating activities</i></b>  |                 |                 |
| <i>Net income *</i>   | \$26,000        |                 |
| <i>Adjustments for:</i>   |                 |                 |
| <i>Add: depreciation expense</i>  | 8,000           |                 |
| <i>Deduct: increase in accounts receivables (\$300,000 – \$190,000)</i>                   | (110,000)       |                 |
| <i>Deduct: increase in inventory (\$200,000 – \$140,000)</i>                              | (60,000)        |                 |
| <i>Add: increase in accounts payable (\$200,000 - \$40,000)</i>                           | <u>160,000</u>  |                 |
| <i>Net cash flow from operating activities</i>  |                 | \$24,000        |
| <b><i>Cash flows from investing activities</i></b>  |                 |                 |
| <i>Purchase of vehicle</i>  | (40,000)        |                 |
| <i>Sale of vehicle</i>  | <u>32,000</u>   |                 |
| <i>Net cash flow from investing activities</i>  |                 | (8,000)         |
| <b><i>Cash flows from financing activities</i></b>  |                 |                 |
| <i>Dividends paid</i>   | (20,000)        |                 |
| <i>Issued preferred shares</i>  | 20,000          |                 |
| <i>Issued common shares</i>   | 50,000          |                 |
| <i>Redeemed common shares</i>   | <u>(20,000)</u> |                 |
| <i>Net cash from flow financing activities</i>  |                 | <u>30,000</u>   |
| <i>Net increase in cash</i>   |                 | 46,000          |
| <i>Cash, January 1, 2017</i>  |                 | <u>0</u>        |
| <i>Cash, December 31, 2017</i>  |                 | <u>\$46,000</u> |

| <i>* Calculation of 2017 Net Income</i> |               |                  |
|---|---------------|------------------|
| <i>Revenues and Gains:</i>              |               |                  |
| <i>Sales</i>                            |               | \$300,000        |
| <i>Expenses and Losses:</i>             |               |                  |
| <i>Cost of goods sold</i>               | 140,000       |                  |
| <i>Administrative expenses</i>          | 100,000       |                  |
| <i>Interest expense</i>                 | 6,000         |                  |
| <i>Depreciation expense</i>             | 8,000         |                  |
| <i>Income tax expense</i>               | <u>20,000</u> | <u>274,000</u>   |
| <i>Net income</i>                       |               | <u>\$ 26,000</u> |

Non Cash Transactions (disclosure mandatory):

1. Interest paid was \$6,000.
2. Income tax paid was \$20,000.
3. The company issued 4-year, 6% bonds payable, at par, in exchange for land which had a fair market value of \$80,000.

**Question No. 6 (20 marks)**

Perven Company manufactures equipment. Perven’s products range from simple automated machinery to complex systems containing numerous components. Unit selling prices are quoted inclusive of installation. The installation process does not involve changes to the features of the equipment to perform specifications. Perven has the following relationship with Ward Incorporated: Ward can purchase equipment from Perven for a price of \$100,000 and contracts with Perven to install the equipment. The equipment has a stand-alone fair value of \$90,000 and cost of \$47,000. Ward is obligated to pay Perven \$50,000 upon delivery and the remaining \$50,000 upon installation of the equipment.

Perven delivers the equipment on August 1, 2018, and completes the installation of the equipment on October 1, 2018. The equipment has a useful life of 5 years.

Perven follows the contract-based approach to revenue recognition under IFRS.

**Required: (Show supporting calculations where necessary)**

- (a) Using the information given in the question above, describe and illustrate the five-step process Perven should use for revenue recognition under IFRS 15. (5 marks)
- (b) Using market data, Perven determines installation service is estimated to have a fair value of \$22,500. How should the transaction price of \$100,000 be allocated among the service obligations? Prepare the journal entries for Perven for this revenue arrangement for 2018, assuming Perven receives payment when installation is completed. (10 marks)
- (c) Now assume that Perven cannot reliably estimate the fair value of the installation service. How should the transaction price of \$100,000 be allocated among the service obligations on August 1, 2018? How much revenue can be recognized at that date? (5 marks)

Answer:

a) *The five-step process for Perven is:*

- *Identifying the Contract with Customers; Perven has contracted to sell and install equipment to Ward Incorporated.*
- *Identifying the separate performance obligation in the contract; Perven has to both supply and install the equipment it has sold to Ward.*
- *Determining the Transaction Price; The contract price is \$100,000.*
- *Allocating the Transaction Price to Separate Performance Obligations; The contract price must be allocated to two performance obligations based upon the stand-alone fair market values of each performance obligation.*
- *Recognizing Revenue – Revenue is recognized by Perven when each performance obligation is satisfied.*

(b) *Having been provided the fair value of both the equipment and the installation, allocation is as follows:*

|                     |                         |
|---------------------|-------------------------|
| <i>Installation</i> | <i>\$22,500 (20%)</i>   |
| <i>Equipment</i>    | <i>90,000 (80%)</i>     |
| <i>Total</i>        | <i>\$112,500 (100%)</i> |

*Allocation:*

|                     |                                  |
|---------------------|----------------------------------|
| <i>Installation</i> | <i>\$100,000 *20% = \$20,000</i> |
| <i>Equipment</i>    | <i>\$100,000 *80% = \$80,000</i> |

*Journal Entries*

*August 1, 2018: Equipment Delivery*

|   |               |               |
|---|---------------|---------------|
| <i>Cash</i> .....                           | <i>50,000</i> |               |
| <i>Accounts Receivable</i> .....            | <i>50,000</i> |               |
| <i>Sales Revenue</i> .....                  |               | <i>80,000</i> |
| <i>Unearned revenue- Installation</i> ..... |               | <i>20,000</i> |
| <i>Cost of Equipment Sold</i> .....         | <i>47,000</i> |               |
| <i>Equipment Inventory</i> .....            |               | <i>47,000</i> |

**Question No. 6 (continued) (20 marks)**

October 1, 2018: Equipment Installation

|                                      |        |        |
|--------------------------------------|--------|--------|
| Cash .....                           | 50,000 |        |
| Unearned revenue- Installation ..... | 20,000 |        |
| Installation revenue .....           |        | 20,000 |
| Accounts Receivable .....            |        | 50,000 |

- (c) *If Perven cannot reliably estimate the cost of the installation, then the residual approach must be used. In this case, the total fair value of the contract is \$100,000. Since the unit stand-alone fair value is \$90,000 then \$10,000 (\$100,000 – \$90,000) is allocated to the installation. The amount of revenue that can be recognized on August 1, 2018 is \$100,000 – \$10,000 = \$90,000.*

**Question No. 7 (17 marks)**

This question comprises three parts. Answer all parts. Each part is independent.

**Part A: (4 marks)**

There are basically two methods of recognizing bad debt expense: (1) the direct write off method; and (2) the allowance method.

**Required:**

Discuss why one of the above methods is preferable to the other, and why the other method is not usually in accordance with generally accepted accounting principles. (4 marks)

**Part B: (4 marks)**

A trial balance before adjustment included the following:

|                                       | <u>Debit</u> | <u>Credit</u> |
|---------------------------------------|--------------|---------------|
| Accounts receivable .....             | \$326,000    |               |
| Allowance for doubtful accounts ..... |              | \$2,050       |
| Sales .....                           |              | \$749,000     |
| Sales returns and allowances .....    | 21,000       |               |

In addition, it was determined that an \$8,000 receivable from a client will not be collected, and management authorized its write-off.

**Required:**

- (a) Give necessary journal entries assuming that the estimate of uncollectible accounts is determined by taking 4% of gross accounts receivable (2 marks).
- (b) How would the Accounts Receivable account be shown in the Statement of Financial Position? (2 marks)

**Part C: (9 marks)**

On April 1, 2017, South Bay Company loaned \$40,000 (face amount) to Northfield Company in exchange for a 9%, 5-year note. Interest is paid/received annually. The market rate of interest on the date of the transaction was 10%. South Bay Company has a March 31 year-end. South Bay records all notes using the net method.

**Required: (Round all calculations to the nearest dollar)**

Prepare the necessary journal entries on the books of South Bay Company on April 1, 2017 and on March 31, 2018. (9 marks)

**Question No. 7 (continued) (17 marks)**

Answer:

Part A:

The allowance method is preferable because: (i) it matches the cost of making a credit sale with the revenues generated by the sale in the same period' (ii) it achieves a proper carrying value for accounts receivable at the end of a period.

The direct write off method does not recognize the bad debt expense until a specific amount has been deemed as uncollectible, which may occur in a subsequent period. As a result, this method does not comply with the matching principle and does not achieve a proper carrying value for accounts receivable at the end of a period.

Part B:

(a)

|   |                         |                  |
|---|-------------------------|------------------|
| Allowance for Doubtful Accounts           | 8,000                   |                  |
| Accounts Receivable                       |                         | 8,000            |
| <br>Bad Debts Expense                     | <br>18,670              |                  |
| Allowance for Doubtful Accounts           |                         | 18,670           |
| <br>Balance in A/R (after-write-off)..... | <br>\$326,000 - 8,000 = | <br>318,000      |
| Rate .....                                |                         | <u>x 4%</u>      |
| Required balance in ADA .....             |                         | 12,720           |
| Current balance in ADA .....              | (2,050) + 8,000 =       | 5,950            |
| Adjustment needed .....                   |                         | <u>\$ 18,670</u> |

(b)

|                                       |               |           |
|---------------------------------------|---------------|-----------|
| Accounts Receivable                   | \$318,000     |           |
| Less: Allowance for Doubtful Accounts | <u>12,720</u> |           |
| Net Realizable Value                  |               | \$305,280 |

Part C:

April 1, 2017

|                 |         |        |
|-----------------|---------|--------|
| Note Receivable | 38,484* |        |
| Cash            |         | 38,484 |

\* Selling price (present value) of note receivable:

|   |               |                  |
|---|---------------|------------------|
| Principal \$40,000 x (PV: i = 10%, n =5) (.6209213) | \$24,837      |                  |
| Interest \$3,600* (PVOA: i =10%, n=5) (3.790787)    | <u>13,647</u> |                  |
| Selling Price (Present Value)                       |               | <u>\$ 38,484</u> |
| *\$40,000 x 9% = \$3,600                            |               |                  |

March 31, 2018

|   |         |       |
|---|---------|-------|
| Cash  | 3,600   |       |
| Interest Revenue  |         | 3,600 |
| <br>Note Receivable   | <br>248 |       |
| Interest Revenue  |         | 248   |
| [(\$38,484 x 10%) - \$3,600] = \$248 (based upon amount of discount amortized from April 1/17 to March 31/18) |         |       |

or

|                  |       |       |
|------------------|-------|-------|
| Cash             | 3,600 |       |
| Note Receivable  | 248   |       |
| Interest Revenue |       | 3,848 |

Present Value 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   | 0.8033362 | 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 | 5.892322 | 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 | 6.973986 |
| 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 | 8.111594 |
| 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 |