



SCO INTERNATIONAL FINANCE OLYMPIAD

GRADE 8 / CLASS 8 QUESTION PAPER

Reviewed website edition with answer key, worked explanations, and corrected finance calculations

Designed for international Grade 8 learners to apply financial reasoning in practical, age-appropriate contexts.

- 50 carefully reviewed multiple-choice questions with answer keys and explanations
- Topics include taxation, zero-based budgeting, spreadsheet reasoning, credit and debit cards, and ethical giving
- Questions progress from core skills to applied reasoning and achievers-level challenges
- Uses generic local currency units so the content is globally adaptable for SCO learners

Taxation	Budgeting	Spreadsheet	Credit Cards	Debit Cards	Ethical Giving
Net Income	Variance	APR	Utilization	Transparency	Achievers

SCO International Olympiad | Website Ready | Editable Word Format

International Finance Olympiad - Grade 8

Website-ready reviewed edition with corrected answer keys and worked explanations. The paper uses age-appropriate global finance contexts and generic local currency units so that students from different countries can attempt the same questions without relying on country-specific tax law.

Paper Detail	Final Setting
Olympiad	SCO International Finance Olympiad
Grade / Class	Grade 8 / Class 8
Total Questions	50 MCQs
Question Type	Single correct answer from four options
Included in this Word file	Question blocks, options, answer key, and detailed explanations
Currency Reference	Generic local currency units for international adaptability

Learning Segments

Segment	Question Range	Main Skills
Segment A - Core Finance Skills	Q1-Q20	Tax basics, net income, discounts/taxes, zero-based budgeting, debit/credit basics, ethical giving
Segment B - Applied International Reasoning	Q21-Q40	Deductions/credits, spreadsheet formulas, variance, APR, utilization, minimum payment, fundraising accountability
Segment C - Achievers Section	Q41-Q50	Multi-step tax and budget reasoning, surplus formulas, daily APR, utilization targets, social-impact evaluation

Student Instructions

- Read each question carefully and choose the best answer from A, B, C, or D.
- All amounts are in generic local currency units unless stated otherwise.
- Where tax, discount, APR, or percentage rules are given, use the rule exactly as stated in the question.
- Explanations are included after each question for teacher-led review or website learning mode.

Segment A - Core Finance Skills

Foundation questions for tax, budgeting, cards, and ethical giving.

Question 1 | Taxation Essentials

A student earns 500 local currency units from weekend work. A deductible education contribution of 40 reduces the taxable amount. Tax is withheld at 10% of taxable income, and a separate mandatory contribution of 25 is also deducted from the gross income. What is the student's net income?

A. 414	B. 429
C. 454	D. 489

Correct Answer: B. 429

Explanation:

Gross income is the total earned before deductions.

Taxable income = $500 - 40 = 460$.

Tax withheld = 10% of $460 = 46$.

Net income = $500 - 46 - 25 = 429$.

The tricky part is that the deductible amount reduces taxable income, but the mandatory contribution is still separately deducted from gross income.

Question 2 | Taxation Essentials

A bag is listed at 80 local currency units. The shop gives a 20% discount before adding a 15% consumption tax. What is the final amount paid?

- | | |
|----------|----------|
| A. 92.00 | B. 76.00 |
| C. 70.40 | D. 73.60 |

Correct Answer: D. 73.60

Explanation:

The tax is calculated after the discount.

Discount = 20% of 80 = 16.

Discounted price = 80 - 16 = 64.

Consumption tax = 15% of 64 = 9.60.

Final price = 64 + 9.60 = 73.60.

Question 3 | Taxation Essentials

Ravi's total annual tax due is 1,260 local currency units. His employer withheld 120 units per month for 12 months. What should happen at year-end?

- | | |
|---------------------------------------|-----------------------------|
| A. He should receive a refund of 180. | B. He should pay 180 more. |
| C. He should receive a refund of 120. | D. No adjustment is needed. |

Correct Answer: A. He should receive a refund of 180.

Explanation:

Total tax withheld = 120 x 12 = 1,440.

Actual tax due = 1,260.

Since Ravi already paid 1,440, he paid 180 more than required.

Therefore, he should receive a refund of 180.

Question 4 | Taxation Essentials

Which statement best explains why governments collect taxes in a fair civic finance system?

- | | |
|---|---|
| A. To guarantee every taxpayer receives exactly the same amount back in cash. | B. To make all goods free for everyone immediately. |
| C. To fund public services and shared infrastructure. | D. To replace budgeting by households and businesses. |

Correct Answer: C. To fund public services and shared infrastructure.

Explanation:

Governments collect taxes to provide public services such as schools, roads, healthcare, safety, and infrastructure.

Taxes are not meant to return the exact same cash amount to each person. They are used for common public needs.

Question 5 | Taxation Essentials

A country uses this simple tax rule: first 3,000 units taxed at 0%, next 2,000 units taxed at 10%, and income above 5,000 units taxed at 20%. If Leena earns 6,200 units, how much tax does she owe?

- | | |
|----------|--------|
| A. 620 | B. 440 |
| C. 1,240 | D. 320 |

Correct Answer: B. 440

Explanation:

First 3,000 is taxed at 0%, so tax = 0.

Next 2,000 is taxed at 10%, so tax = 200.

Income above 5,000 = 6,200 - 5,000 = 1,200.

Tax on 1,200 at 20% = 240.

Total tax = 200 + 240 = 440.

Question 6 | Budget Management & Spreadsheet Reasoning

A zero-based monthly budget has net income of 1,500 units. Planned items are rent 500, internet 50, transport 120, food 300, school materials 80, giving 45, entertainment 100, and debt repayment 200. How much should be assigned to emergency savings so that the budget is zero-based?

- | | |
|--------|----------|
| A. 105 | B. 95 |
| C. 155 | D. 1,395 |

Correct Answer: A. 105

Explanation:

In a zero-based budget, all income must be assigned to a purpose.

Total planned amount = 500 + 50 + 120 + 300 + 80 + 45 + 100 + 200 = 1,395.

Remaining income = 1,500 - 1,395 = 105.

Therefore, 105 should be assigned to emergency savings.

Question 7 | Budget Management & Spreadsheet Reasoning

Which classification is most accurate for a monthly student budget?

- | | |
|---|---|
| A. Rent and groceries are fixed; loan payment and movies are variable. | B. Groceries and movies are fixed; rent and loan payment are variable. |
| C. All four are fixed because they may happen every month. | D. Rent and loan payment are fixed; groceries and movies are variable. |

Correct Answer: D. Rent and loan payment are fixed; groceries and movies are variable.

Explanation:

Fixed expenses usually remain the same or are committed in advance, such as rent and a regular loan payment. Variable expenses change depending on usage or choices, such as groceries and movies. The tricky point is that groceries are necessary, but they are still variable because the amount can change.

Question 8 | Budget Management & Spreadsheet Reasoning

A budget planned 150 units for savings. During the month, food cost 40 more than planned, but transport cost 10 less than planned. Income and all other expenses stayed the same. What is the new actual saving amount?

- | | |
|---------------|---------------|
| A. 190 | B. 160 |
| C. 120 | D. 110 |

Correct Answer: C. 120

Explanation:

Food overspending = 40.

Transport saving = 10.

Net extra spending = $40 - 10 = 30$.

New savings = $150 - 30 = 120$.

Question 9 | Budget Management & Spreadsheet Reasoning

A student's zero-based budget balances exactly. At month-end, actual spending is 45 units higher than planned. What is the best correction to avoid debt?

- | | |
|--|--|
| A. Ignore the difference because the original budget was correct. | B. Reduce another flexible category or planned saving by 45 and update the next budget. |
| C. Record the extra 45 as income. | D. Use a credit card and leave it unpaid. |

Correct Answer: B. Reduce another flexible category or planned saving by 45 and update the next budget.

Explanation:

If spending is higher than planned and income does not increase, the budget must be corrected. The student should reduce another flexible category, use a planned buffer, or adjust future spending. Ignoring the difference or using unpaid credit creates a debt problem.

Question 10 | Budget Management & Spreadsheet Reasoning

In a spreadsheet, cell B2 contains monthly net income. Cells B3:B8 contain all planned spending, saving, giving, and debt repayment categories. Which formula correctly checks whether the zero-based budget has nothing left unassigned?

- | | |
|-------------------|-------------------|
| A. =SUM(B2:B8) | B. =B2+B3+B8 |
| C. =SUM(B3:B8)-B2 | D. =B2-SUM(B3:B8) |

Correct Answer: D. =B2-SUM(B3:B8)

Explanation:

A zero-based budget checks whether income minus all assigned categories equals zero.

The correct formula is:

$B2 - \text{SUM}(B3:B8)$.

If the answer is 0, the budget is fully assigned.

Question 11 | Budget Management & Spreadsheet Reasoning

In a budget variance sheet, planned lunch spending is 70 units and actual lunch spending is 92 units. If variance is calculated as Actual - Planned, what is the correct interpretation?

- | | |
|----------------------------------|--------------------------|
| A. +22, unfavorable overspending | B. -22, favorable saving |
| C. +22, favorable saving | D. -22, income shortage |

Correct Answer: A. +22, unfavorable overspending

Explanation:

Variance = Actual - Planned.

Variance = $92 - 70 = +22$.

Since actual spending is higher than planned, it is an unfavorable overspending variance.

Question 12 | Credit & Debit Cards

Which statement correctly compares a debit card and a credit card?

- | | |
|---|---|
| A. A debit card always improves credit history faster than a credit card. | B. A credit card spends only the money already in the bank account. |
| C. A debit card uses available account money, while a credit card allows borrowing that must be repaid. | D. Both cards are identical if they have the same logo. |

Correct Answer: C. A debit card uses available account money, while a credit card allows borrowing that must be repaid.

Explanation:

A debit card generally uses money already available in the bank account. A credit card allows the user to borrow money up to a limit. If the borrowed amount is not repaid on time, interest or finance charges may apply.

Question 13 | Credit & Debit Cards

A credit card balance of 600 units is carried for 2 months at a simple APR of 24% per year. Ignoring fees and compounding, what finance charge is closest?

- | | |
|-------|--------|
| A. 12 | B. 24 |
| C. 48 | D. 144 |

Correct Answer: B. 24

Explanation:

Simple finance charge = Principal x APR x Time.

Time = 2 months = 2/12 year.

Finance charge = 600 x 24% x 2/12.

= 600 x 0.24 x 1/6

= 24.

So the finance charge is 24 units.

Question 14 | Credit & Debit Cards

Nia pays only the minimum amount on her credit card while continuing to make new purchases each month. What is the main financial risk?

- | | |
|--|---|
| A. Her debit card will automatically pay the full balance. | B. Her credit limit will become unlimited. |
| C. She will never pay interest if she pays any amount. | D. Her debt may grow because unpaid balances can create interest charges. |

Correct Answer: D. Her debt may grow because unpaid balances can create interest charges.

Explanation:

Paying only the minimum may keep the account active, but it often leaves an unpaid balance. That balance can create interest charges. If new purchases continue, the debt may grow over time.

Question 15 | Credit & Debit Cards

Which habit best prevents credit card debt problems?

- | | |
|---|---|
| A. Pay the full statement balance on time and avoid buying beyond the budget. | B. Use the card until the limit is reached to increase rewards. |
| C. Pay late if the purchase was necessary. | D. Ignore small purchases because they do not affect the bill. |

Correct Answer: A. Pay the full statement balance on time and avoid buying beyond the budget.

Explanation:

The safest credit habit is to spend within the budget and pay the full statement balance by the due date. Rewards are helpful only if they do not encourage overspending or interest charges.

Question 16 | Credit & Debit Cards

A student has 300 units in a bank account and wants to buy a 420-unit device. Which choice is most financially responsible?

- | | |
|--|---|
| A. Use the debit card because the bank must approve all purchases. | B. Use the credit card and decide later how to pay. |
| C. Save at least 120 more units or choose a lower-cost option. | D. Borrow from a friend and ignore the budget. |

Correct Answer: C. Save at least 120 more units or choose a lower-cost option.

Explanation:

The student has only 300 units but wants to buy something costing 420 units. The shortage is $420 - 300 = 120$. The responsible decision is to save at least 120 more units or choose a lower-cost option. Buying without a repayment plan can create debt.

Question 17 | Credit & Debit Cards

A credit card has a limit of 1,000 units. The student wants to keep the balance below 30% of the limit. If the current balance is 350 units, what minimum payment is needed to bring the balance down to 30%?

- | | |
|--------|-------|
| A. 30 | B. 35 |
| C. 300 | D. 50 |

Correct Answer: D. 50

Explanation:

30% of 1,000 = 300.

Current balance = 350.

To reduce the balance to 300, the student must pay:

$350 - 300 = 50$.

So the minimum payment needed is 50.

Question 18 | Ethical Giving & Social Impact

A class collected 800 units for charity. Charity A claims 95% goes to programs but refuses to share reports. Charity B says 80% goes to programs and publishes audited accounts, project photos, and impact results. Which is the best ethical decision?

- | | |
|--|--|
| A. Choose Charity A because the highest percentage always proves honesty. | B. Choose Charity B because it provides transparent and accountable evidence. |
| C. Split money randomly because all charities are the same. | D. Cancel giving because no charity can be evaluated. |

Correct Answer: B. Choose Charity B because it provides transparent and accountable evidence.

Explanation:

Ethical giving is not based only on the highest claimed percentage. Transparency, accountability, and proof of impact matter. Charity B provides evidence that donors can review, making it the more responsible choice.

Question 19 | Ethical Giving & Social Impact

Which fundraising rule is fairest for a school social-impact campaign?

- | | |
|--|--|
| A. Make donations voluntary, record money transparently, and do not rank students by donation size. | B. Give prizes only to students whose families donate the most. |
| C. Hide the final amount collected to avoid questions. | D. Allow one student to keep the cash at home without records. |

Correct Answer: A. Make donations voluntary, record money transparently, and do not rank students by donation size.

Explanation:

A fair fundraising campaign should avoid pressure and protect student dignity. Donations should be voluntary, records should be clear, and students should not be ranked or shamed based on how much their families donate.

Question 20 | Ethical Giving & Social Impact

A student council has 600 units to support clean drinking water. Project X gives 20 filters at 30 units each and publishes delivery receipts. Project Y promises 40 filters at 15 units each but gives no address, no receipt, and asks for cash only. Which choice is most responsible?

- | | |
|---|---|
| A. Project Y, because the promised number of filters is higher. | B. Project Y, because cash-only payments are always faster. |
| C. Project X, because the cost and delivery evidence can be verified. | D. Neither project, because social impact cannot be measured. |

Correct Answer: C. Project X, because the cost and delivery evidence can be verified.

Explanation:

Project Y appears cheaper and promises more filters, but it lacks proof, address, receipts, and accountability. Project X provides clear delivery evidence and receipts. Responsible social-impact decisions consider both cost and trustworthiness, not only the biggest promise.

Segment B - Applied International Reasoning

Multi-step calculations and stronger finance judgment questions.

Question 21 | Taxation Essentials

Maya earns 2,400 units in a month. She contributes 120 units to an approved savings plan that reduces taxable income. Her taxable income is taxed at 12%. In addition, 60 units are deducted for a transport pass that does not reduce taxable income. What is Maya's net income?

- | | |
|-------------|-------------|
| A. 2,112.00 | B. 2,061.60 |
| C. 1,946.40 | D. 2,220.00 |

Correct Answer: C. 1,946.40

Explanation:

Gross income = 2,400.

Approved savings deduction = 120.

Taxable income = 2,400 - 120 = 2,280.

Tax = 12% of 2,280 = 273.60.

Transport pass deduction = 60.

The approved savings contribution reduces taxable income, but it is still money Maya does not take home.

Net income = 2,400 - 120 - 273.60 - 60 = 1,946.40.

Question 22 | Taxation Essentials

A tablet costs 300 units before tax. A store first gives a 10% discount. Then a 5% environmental fee is added to the discounted price, and finally a 12% sales tax is charged on the price after the environmental fee. What is the final price?

A. 317.52	B. 315.00
C. 336.00	D. 302.40

Correct Answer: A. 317.52

Explanation:

Original price = 300.

Discount = 10% of 300 = 30.

Discounted price = 300 - 30 = 270.

Environmental fee = 5% of 270 = 13.50.

Price before sales tax = 270 + 13.50 = 283.50.

Sales tax = 12% of 283.50 = 34.02.

Final price = 283.50 + 34.02 = 317.52.

The order matters: discount first, fee second, tax last.

Question 23 | Taxation Essentials

A simple income tax system works as follows:

First 5,000 units: 0% tax

Next 5,000 units: 10% tax

Any income above 10,000 units: 18% tax

A student's annual income is 13,500 units. She also receives a tax credit of 150 units after tax is calculated. How much final tax does she pay?

A. 1,130	B. 780
C. 630	D. 980

Correct Answer: D. 980

Explanation:

First 5,000 is taxed at 0% = 0.

Next 5,000 is taxed at 10% = 500.

Income above 10,000 = 13,500 - 10,000 = 3,500.

Tax on 3,500 at 18% = 630.

Tax before credit = 500 + 630 = 1,130.

Tax credit = 150.

Final tax = 1,130 - 150 = 980.

A tax credit reduces the tax directly after calculation.

Question 24 | Taxation Essentials

Which statement correctly explains the difference between a tax deduction and a tax credit?

- | | |
|---|--|
| A. A deduction increases tax, while a credit increases gross income. | B. A deduction reduces taxable income, while a credit directly reduces tax payable. |
| C. A deduction and a credit are always financially identical. | D. A credit reduces taxable income, while a deduction directly reduces tax payable. |

Correct Answer: B. A deduction reduces taxable income, while a credit directly reduces tax payable.

Explanation:

A deduction lowers the income on which tax is calculated. A credit reduces the actual tax amount after the tax has been calculated. For the same number, a credit is usually more powerful because it reduces tax directly.

Question 25 | Taxation Essentials

A worker's annual tax due is 2,160 units. During the year, 155 units were withheld each month for 12 months. The worker also paid an advance tax of 220 units. What is the final result?

- | | |
|-------------------------------|---|
| A. Refund of 100 units | B. Additional payment of 80 units |
| C. Refund of 300 units | D. Additional payment of 100 units |

Correct Answer: B. Additional payment of 80 units

Explanation:

Total monthly withholding = $155 \times 12 = 1,860$.

Advance tax paid = 220.

Total tax already paid = $1,860 + 220 = 2,080$.

Actual tax due = 2,160.

Difference = $2,160 - 2,080 = 80$.

The worker has paid less than the actual tax due, so the worker must pay 80 more.

Question 26 | Budget Management & Spreadsheet Reasoning

A family has monthly net income of 3,200 units. Their planned budget is: rent 900, food 650, transport 280, utilities 240, education 300, insurance 180, savings 400, giving 100, and entertainment 200. Is this a zero-based budget?

- | | |
|--|--|
| A. Yes, because savings are included. | B. No, because fixed expenses are higher than variable expenses. |
| C. No, because planned categories exceed income by 50 units. | D. Yes, because all important categories are listed. |

Correct Answer: C. No, because planned categories exceed income by 50 units.

Explanation:

Total planned amount = $900 + 650 + 280 + 240 + 300 + 180 + 400 + 100 + 200 = 3,250$.

Monthly income = 3,200.

The budget exceeds income by 50 units.

A zero-based budget should assign income exactly, not overspend it.

Question 27 | Budget Management & Spreadsheet Reasoning

A student planned 120 units for entertainment and 300 units for savings. Actual entertainment spending was 175 units. Food spending was 35 units lower than planned. If income and all other categories stayed the same, what should savings become to keep the budget balanced?

- | | |
|--------|--------|
| A. 265 | B. 245 |
| C. 355 | D. 280 |

Correct Answer: D. 280

Explanation:

Entertainment overspending = $175 - 120 = 55$.

Food saving = 35.

Net extra spending = $55 - 35 = 20$.

Savings must decrease by 20.

New savings = $300 - 20 = 280$.

Question 28 | Budget Management & Spreadsheet Reasoning

In a spreadsheet budget, B2 contains net income. B3:B10 contains planned expenses. B11 contains planned savings. Which formula correctly shows whether the budget is balanced?

A. =SUM(B3:B10)+B11

B. =B2-SUM(B3:B10)-B11

C. =B2+B11-SUM(B3:B10)

D. =SUM(B2:B11)

Correct Answer: B. =B2-SUM(B3:B10)-B11

Explanation:

A balanced budget checks what remains after expenses and savings are assigned.

Income - Expenses - Savings = Remaining balance.

So the correct formula is:

=B2-SUM(B3:B10)-B11

If the result is 0, the budget is balanced.

Question 29 | Budget Management & Spreadsheet Reasoning

A budget report shows:

Planned spending = 1,800 units

Actual spending = 1,944 units

If variance percentage is calculated as:

$(\text{Actual} - \text{Planned}) / \text{Planned} \times 100$

What is the variance percentage?

A. 8% unfavorable

B. 7.4% favorable

C. 12% unfavorable

D. 144% unfavorable

Correct Answer: A. 8% unfavorable

Explanation:

Difference = $1,944 - 1,800 = 144$.

Variance percentage = $144 / 1,800 \times 100 = 8\%$.

Since actual spending is higher than planned spending, it is unfavorable.

Question 30 | Budget Management & Spreadsheet Reasoning

A student wants to save 960 units for a laptop in 8 months. After 3 months, the student has saved only 270 units. How much must the student save each month for the remaining months to still reach the goal?

- | | |
|--------|--------|
| A. 90 | B. 120 |
| C. 150 | D. 138 |

Correct Answer: D. 138

Explanation:

Total goal = 960.

Already saved = 270.

Remaining amount = $960 - 270 = 690$.

Remaining months = $8 - 3 = 5$.

Required saving per month = $690 / 5 = 138$.

The student must save 138 units per month for the remaining 5 months.

Question 31 | Credit & Debit Cards

A credit card balance of 900 units is carried for 45 days. The APR is 20% per year. Using simple interest and a 360-day year, what is the finance charge?

- | | |
|----------|----------|
| A. 18.00 | B. 22.50 |
| C. 45.00 | D. 90.00 |

Correct Answer: B. 22.50

Explanation:

Simple interest = Principal x Rate x Time.

Principal = 900.

APR = 20% = 0.20.

Time = $45/360$ year.

Finance charge = $900 \times 0.20 \times 45/360$.

= $900 \times 0.20 \times 0.125$

= 22.50.

Question 32 | Credit & Debit Cards

A student has two credit cards. Card A has a limit of 800 units and a balance of 260 units. Card B has a limit of 1,200 units and a balance of 340 units. What is the total credit utilization ratio?

- | | |
|--------|--------|
| A. 25% | B. 27% |
| C. 30% | D. 35% |

Correct Answer: C. 30%

Explanation:

Total credit limit = $800 + 1,200 = 2,000$.

Total balance = $260 + 340 = 600$.

Credit utilization = $600 / 2,000 \times 100 = 30\%$.

The tricky part is that utilization should be calculated using total balance divided by total credit limit, not by averaging the two card percentages.

Question 33 | Credit & Debit Cards

A credit card statement balance is 720 units. The minimum payment is 5% of the statement balance or 25 units, whichever is higher. What is the minimum payment?

- | | |
|-------|-------|
| A. 36 | B. 25 |
| C. 72 | D. 50 |

Correct Answer: A. 36

Explanation:

5% of 720 = 36.

The rule says the minimum payment is 5% or 25 units, whichever is higher.

Since 36 is higher than 25, the minimum payment is 36.

Question 34 | Credit & Debit Cards

A student buys goods worth 500 units using a credit card. The card has a 24% APR. The student pays the full statement balance by the due date. Ignoring fees, what finance charge should normally apply?

- | | |
|-------|-------|
| A. 10 | B. 24 |
| C. 12 | D. 0 |

Correct Answer: D. 0

Explanation:

Credit cards usually charge interest on purchases when the balance is not paid in full by the due date. If the student pays the full statement balance on time and no fees apply, the finance charge should normally be 0. The APR matters if the balance is carried.

Question 35 | Credit & Debit Cards

A student has a debit card linked to a bank account with 180 units. The student attempts to buy an item costing 220 units. Which is the most financially accurate statement?

- | | |
|--|--|
| A. The purchase must always be approved because debit cards are safer than credit cards. | B. The purchase may be declined or may cause overdraft charges depending on the account rules. |
| C. The bank automatically converts the debit card into a credit card. | D. The student earns interest because the account balance is low. |

Correct Answer: B. The purchase may be declined or may cause overdraft charges depending on the account rules.

Explanation:

A debit card uses money from the bank account. If the account does not have enough money, the transaction may be declined. In some systems, it may go through and create an overdraft charge if overdraft service is enabled. This is different from a credit card, which allows borrowing up to a credit limit.

Question 36 | Credit & Debit Cards

A credit card charges a late fee of 30 units and a simple monthly interest rate of 2% on unpaid balance. If a student misses the payment on a 700-unit balance, what is the total extra cost for that month?

- | | |
|-------|-------|
| A. 14 | B. 30 |
| C. 44 | D. 64 |

Correct Answer: C. 44

Explanation:

Monthly interest = 2% of 700 = 14.

Late fee = 30.

Total extra cost = 14 + 30 = 44.

The tricky part is that both the interest and the late fee must be included.

Question 37 | Ethical Giving & Social Impact

A charity project claims it can educate 50 children for 1,000 units. Another project can educate 35 children for 700 units and publishes audited reports. Based only on cost per child, which project is cheaper?

- | | |
|---------------------------------------|----------------------------------|
| A. Both have the same cost per child. | B. The first project is cheaper. |
| C. The second project is cheaper. | D. It cannot be calculated. |

Correct Answer: A. Both have the same cost per child.

Explanation:

First project cost per child = $1,000 / 50 = 20$ units.

Second project cost per child = $700 / 35 = 20$ units.

Both have the same cost per child.

However, in real ethical giving, transparency and evidence would still matter before making a final donation decision.

Question 38 | Ethical Giving & Social Impact

A school fundraiser collects 2,400 units. The rule is that at least 75% must go directly to the stated cause. Administrative costs are 420 units, and event costs are 210 units. Does the fundraiser meet the rule?

- | | |
|--|---|
| A. Yes, because 2,400 is greater than 420. | B. No, because administrative costs must be zero. |
| C. Yes, because more than 50% goes to the cause. | D. No, because only 73.75% goes to the cause. |

Correct Answer: D. No, because only 73.75% goes to the cause.

Explanation:

Total non-cause cost = $420 + 210 = 630$.

Amount going to cause = $2,400 - 630 = 1,770$.

Percentage going to cause = $1,770 / 2,400 \times 100 = 73.75\%$.

The rule requires at least 75%, so the fundraiser does not meet the rule.

Question 39 | Ethical Giving & Social Impact

A donor promises to match every 3 units raised by students with 1 additional unit, up to a maximum donor contribution of 500 units. If students raise 1,800 units, how much total money will the campaign have?

- | | |
|----------|----------|
| A. 2,200 | B. 2,300 |
| C. 2,400 | D. 1,900 |

Correct Answer: B. 2,300

Explanation:

Matching rule: donor gives 1 unit for every 3 units raised.

Possible donor match = $1,800 / 3 = 600$.

But donor contribution is capped at 500.

So donor gives only 500.

Total campaign money = $1,800 + 500 = 2,300$.

Question 40 | Ethical Giving & Social Impact

A student council must choose between two social-impact projects. Project A costs 900 units and gives verified support to 30 families. Project B costs 800 units and claims to support 40 families but has no receipts, no beneficiary list, and no reporting plan. Which decision best applies fairness, transparency, and accountability?

- | | |
|--|---|
| A. Choose Project B because it claims to help more families at a lower cost. | B. Choose Project A only because it costs more. |
| C. Choose Project A because its impact is verified, even though Project B claims a higher number. | D. Choose Project B because documentation slows down charity work. |

Correct Answer: C. Choose Project A because its impact is verified, even though Project B claims a higher number.

Explanation:

A responsible decision should not be based only on the largest claimed impact. Project B appears attractive because it claims to help more families at lower cost, but it has no proof, no receipts, and no reporting plan. Project A has verified support, which makes it stronger under transparency and accountability standards.

Segment C - Achievers Section

Higher-order reasoning for top scorers and olympiad achievers.

Question 41 | Taxation Essentials

Aarav is preparing a monthly money report for a school finance project. His gross income from tutoring is 1,800 units. He contributes 100 units to an approved student savings plan, which reduces his taxable income. He also pays 70 units for a monthly digital learning subscription, but this subscription does not reduce taxable income. The tax rate is 15% of taxable income. After calculating tax, he also sets aside 120 units for emergency savings from the remaining money.

What is the amount left for Aarav's other personal expenses after tax, subscription, approved savings contribution, and emergency savings?

- | | |
|-----------------|-----------------|
| A. 1,155 | B. 1,255 |
| C. 1,275 | D. 1,375 |

Correct Answer: B. 1,255

Explanation:

Gross income = 1,800.

Approved savings plan = 100.

Taxable income = 1,800 - 100 = 1,700.

Tax = 15% of 1,700 = 255.

Now calculate the money left after all deductions and savings:

Amount left = 1,800 - 100 - 255 - 70 - 120

Amount left = 1,255.

The tricky part is that the approved savings contribution reduces taxable income, but it is still money Aarav cannot spend. The digital learning subscription does not reduce taxable income, but it is still an expense.

Question 42 | Taxation Essentials

A city introduces a “green purchase” tax system. A bicycle helmet has a marked price of 240 units. The store gives a 12.5% discount because it is part of a safety campaign. After the discount, a 4% environmental handling fee is added. Then a 10% consumption tax is applied on the price including the environmental fee.

What is the final amount payable by the customer?

A. 240.24	B. 242.55
C. 244.80	D. 248.64

Correct Answer: A. 240.24

Explanation:

Marked price = 240.

Discount = 12.5% of 240 = 30.

Discounted price = 240 - 30 = 210.

Environmental handling fee = 4% of 210 = 8.40.

Price before consumption tax = 210 + 8.40 = 218.40.

Consumption tax = 10% of 218.40 = 21.84.

Final amount = 218.40 + 21.84 = 240.24.

This question is tricky because students may wrongly apply tax before discount or may calculate the consumption tax only on the discounted price instead of the price after the environmental fee.

Question 43 | Taxation Essentials

A country uses the following income-tax rule for students who earn part-time income:

First 4,000 units: no tax

Next 3,000 units: 8% tax

Next 5,000 units: 14% tax

Income above 12,000 units: 22% tax

Sofia earns 14,500 units in a year. She has a tax deduction of 500 units and a tax credit of 180 units. The deduction is applied before calculating tax, while the credit is applied after calculating tax.

How much final tax does Sofia pay?

A. 1,200

B. 1,320

C. 1,430

D. 1,610

Correct Answer: A. 1,200

Explanation:

Annual income = 14,500.

Tax deduction = 500, so taxable income = $14,500 - 500 = 14,000$.

Tax by slabs:

First 4,000 at 0% = 0.

Next 3,000 at 8% = 240.

Next 5,000 at 14% = 700.

Remaining income above 12,000 = $14,000 - 12,000 = 2,000$.

Tax on 2,000 at 22% = 440.

Tax before credit = $0 + 240 + 700 + 440 = 1,380$.

Tax credit = 180.

Final tax = $1,380 - 180 = 1,200$.

Question 44 | Budget Management & Spreadsheet Reasoning

A Grade 8 student council prepares a zero-based budget for an international cultural event. The expected income is 5,000 units from ticket sales and 1,500 units from sponsorship. Planned expenses are hall rent 2,200, sound system 750, decoration 600, student kits 900, refreshments 1,150, emergency reserve 500, and charity donation 300.

After reviewing the budget, the teacher says the budget is not yet zero-based. What is the most accurate reason?

- | | |
|---|--|
| A. The budget has 100 units left unassigned. | B. The budget overspends by 100 units. |
| C. The budget is exactly zero-based. | D. The charity donation should not be part of a budget. |

Correct Answer: A. The budget has 100 units left unassigned.

Explanation:

Total income = 5,000 + 1,500 = 6,500.

Total planned expenses and allocations:

Hall rent = 2,200

Sound system = 750

Decoration = 600

Student kits = 900

Refreshments = 1,150

Emergency reserve = 500

Charity donation = 300

Total planned amount = 2,200 + 750 + 600 + 900 + 1,150 + 500 + 300 = 6,400.

Unassigned amount = 6,500 - 6,400 = 100.

A zero-based budget should assign every unit of income to a clear purpose such as spending, saving, reserve, giving, or debt repayment. Since 100 units are still unassigned, the budget is not fully zero-based.

Question 45 | Budget Management & Spreadsheet Reasoning

A school club planned the following monthly budget: printing 450 units, online tools 300 units, snacks 250 units, local transport 500 units, and savings 400 units. At the end of the month, printing was 40 units lower than planned, online tools were 30 units higher, snacks were 90 units higher, and transport was 20 units lower. The club wants to keep the total budget balanced by adjusting only the savings category.

What should the new savings amount be?

A. 340

B. 360

C. 380

D. 420

Correct Answer: A. 340

Explanation:

Printing saved 40 units.

Online tools overspent 30 units.

Snacks overspent 90 units.

Transport saved 20 units.

Total savings from lower expenses = $40 + 20 = 60$.

Total overspending = $30 + 90 = 120$.

Net overspending = $120 - 60 = 60$.

Original savings = 400.

New savings = $400 - 60 = 340$.

The tricky part is that lower spending in some categories partly offsets overspending in other categories, so the full snack overspending should not be deducted directly from savings.

Question 46 | Budget Management & Spreadsheet Reasoning

In a spreadsheet, a student tracks a monthly budget. Cell B2 contains total income. Cells B4:B9 contain planned expenses. Cells C4:C9 contain actual expenses. Cell B11 contains planned savings. Cell C11 contains actual savings. The student wants a formula that shows whether the actual month was better or worse than the planned month, based on final surplus.

Which formula correctly calculates the change in final surplus as:

Actual surplus - Planned surplus?

A. $=B2-SUM(B4:B9)-B11)-(B2-SUM(C4:C9)-C11)$	B. $=(B2-SUM(C4:C9)-C11)-(B2-SUM(B4:B9)-B11)$
C. $=SUM(C4:C9)-SUM(B4:B9)+C11-B11$	D. $=B2-SUM(B4:C9)-B11-C11$

Correct Answer: B. $=(B2-SUM(C4:C9)-C11)-(B2-SUM(B4:B9)-B11)$

Explanation:

Planned surplus = Income - Planned expenses - Planned savings.

Actual surplus = Income - Actual expenses - Actual savings.

The question asks for:

Actual surplus - Planned surplus.

So the correct formula is:

$=(B2-SUM(C4:C9)-C11)-(B2-SUM(B4:B9)-B11)$

Option 1 reverses the order. Option 3 only compares expenses and savings without calculating surplus properly. Option 4 incorrectly adds the planned and actual expense ranges together.

Question 47 | Credit & Debit Cards

Lina has a credit card balance of 1,200 units. The APR is 27% per year. She carries the balance for 40 days. The card uses simple daily interest based on a 360-day year. In addition, she is charged a late fee of 25 units because she missed the due date.

What is the total extra cost for the 40-day period?

A. 36	B. 61
C. 72	D. 97

Correct Answer: B. 61

Explanation:

Simple interest = Principal x Rate x Time.

Principal = 1,200.

APR = 27% = 0.27.

Time = 40/360 year.

Interest = $1,200 \times 0.27 \times 40/360$

Interest = $1,200 \times 0.27 \times 1/9$

Interest = 36.

Late fee = 25.

Total extra cost = $36 + 25 = 61$.

The common mistake is to calculate only the interest and forget the late fee.

Question 48 | Credit & Debit Cards

A student has three credit cards. Card A has a limit of 600 units and a balance of 210 units. Card B has a limit of 900 units and a balance of 270 units. Card C has a limit of 1,500 units and a balance of 270 units. The student wants total credit utilization to be exactly 20% after making one payment.

How much should the student pay in total across the cards?

- | | |
|--------|--------|
| A. 90 | B. 120 |
| C. 150 | D. 180 |

Correct Answer: C. 150

Explanation:

Total credit limit = $600 + 900 + 1,500 = 3,000$.

Current total balance = $210 + 270 + 270 = 750$.

Target utilization = 20% of 3,000 = 600.

Required total balance after payment = 600.

Payment needed = Current balance - Target balance.

Payment needed = $750 - 600 = 150$.

The trick is that students should calculate total utilization using total balance divided by total limit. They should not average the utilization percentages of the three cards.

Question 49 | Ethical Giving & Social Impact

A school fundraiser collects 3,600 units for disaster relief. The committee's rule says at least 78% of the total collection must reach the relief program. Event costs are 450 units. Payment processing charges are 2.5% of the total collection. Printing and promotion cost 230 units. The remaining amount goes to the relief program.

Does the fundraiser meet its own rule?

- | | |
|--|--|
| A. Yes, because 78.61% reaches the relief program. | B. Yes, because 76.40% reaches the relief program. |
| C. No, because only 77.22% reaches the relief program. | D. No, because only 75.00% reaches the relief program. |

Correct Answer: A. Yes, because 78.61% reaches the relief program.

Explanation:

Total collection = 3,600.

Event costs = 450.

Payment processing charges = 2.5% of 3,600 = 90.

Printing and promotion = 230.

Total costs = $450 + 90 + 230 = 770$.

Amount reaching relief program = $3,600 - 770 = 2,830$.

Percentage reaching relief program = $2,830 / 3,600 \times 100 = 78.61\%$ approximately.

Since 78.61% is above the required 78%, the fundraiser meets its own rule.

Question 50 | Ethical Giving & Social Impact

An international school wants to donate 2,400 units to a reading program. Program A says it can provide books to 120 students, but it shares no receipts, no delivery list, and no independent report. Program B can provide books to 96 students and publishes receipts, school delivery records, and a short learning-impact report after 3 months. Program C can provide books to 110 students, but 25% of the donation will first be spent on a promotional ceremony.

Which decision best reflects financial reasoning, fairness, transparency, and accountability?

A. Choose Program A because the number of students claimed is the highest.	B. Choose Program B because its impact is verifiable even though the claimed number is lower.
C. Choose Program C because ceremonies always increase learning impact.	D. Divide the money equally without checking records because all programs are educational.

Correct Answer: B. Choose Program B because its impact is verifiable even though the claimed number is lower.

Explanation:

Program A claims to support the highest number of students, but there is no proof through receipts, delivery lists, or reporting. Program C supports 110 students, but 25% of the money is spent on a ceremony before reaching the educational purpose. Program B supports fewer students than Program A, but it gives receipts, delivery records, and an impact report.

For ethical giving, the best decision is not always the option with the highest claimed number. A strong decision should consider whether the use of funds can be checked and whether the claimed impact is accountable and transparent. Therefore, Program B is the most responsible choice.

Final Answer Key

Use this compact key for quick checking. Full explanations are included in the question blocks above.

Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer
Q1	B	Q2	D	Q3	A	Q4	C	Q5	B
Q6	A	Q7	D	Q8	C	Q9	B	Q10	D
Q11	A	Q12	C	Q13	B	Q14	D	Q15	A
Q16	C	Q17	D	Q18	B	Q19	A	Q20	C
Q21	C	Q22	A	Q23	D	Q24	B	Q25	B
Q26	C	Q27	D	Q28	B	Q29	A	Q30	D
Q31	B	Q32	C	Q33	A	Q34	D	Q35	B
Q36	C	Q37	A	Q38	D	Q39	B	Q40	C
Q41	B	Q42	A	Q43	A	Q44	A	Q45	A
Q46	B	Q47	B	Q48	C	Q49	A	Q50	B

Prepared for School Connect Online - SCO International Olympiad