Unit 13 · Bill and Budget

HARDER PRACTICE QUESTIONS · ANSWER KEY

Full marks 36

Give the marks for the points in the marking scheme; an answer in other words that says the same is right.

1 Fill in the gaps

ANSWER A · 4

- Notebook: $6 \times 45 = \mathbf{270}$.
- Pencil: quantity = amount ÷ rate = $96 \div 12 = \mathbf{8}$. Check: $8 \times 12 = 96$. ✓
- Eraser: rate = amount ÷ quantity = $40 \div 4 = \mathbf{10}$.
- The three amounts we know: $270 + 96 + 40 = 406$. So the geometry box's amount is $726 - 406 = \mathbf{320}$. It is only 1 box, so its rate is also **320**.

MARKING SCHEME

✓ Notebook amount 270.
✓ 8 pencils.
✓ Eraser rate Rs. 10.
✓ Geometry box Rs. 320 (rate and amount).

2 Spot the errors

ANSWER U · 4

i. **Banana**: $2 \times 90 = 180$, not 108. The digits were mixed up. **Orange**: 1.5 kg is 1 kg and half a kg, so $120 + 60 = 180$. The rate was just copied as the amount.
ii. $720 + 180 + 180 + 420 =$ **Rs. 1,500**: one thousand five hundred rupees only.
iii. **Too little**, by $1{,}500 - 1{,}368 =$ **Rs. 132**.

MARKING SCHEME

✓ Banana 180, with the mistake.
✓ Orange 180, with the mistake.
✓ Total Rs. 1,500, in figures and words.
✓ Too little, by Rs. 132.

3 Enough money?

ANSWER A · 4

i. $2 \times 85 = 170$, 240, 160 and $3 \times 45 = 135$. Total: $170 + 240 + 160 + 135 =$ **Rs. 705**.
ii. $1{,}000 - 705 =$ **Rs. 295**.
iii. $295 \div 50 = 5$, remainder 45. He can buy **5 packets** ($5 \times 50 = 250$), and **Rs. 45** is left. A sixth packet would need Rs. 300.

MARKING SCHEME

✓ The four amounts.
✓ Total Rs. 705.
✓ Change Rs. 295.
✓ 5 packets, Rs. 45 left.

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4 Dozens, halves and quarters

ANSWER A · 3

- Eggs: 18 eggs = 1 dozen and half a dozen: 216 + 108 = **Rs. 324**. (Or one egg: 216 ÷ 12 = Rs. 18, and 18 × 18 = 324.)
- Milk: half of 110 = **Rs. 55**.
- Paneer: a quarter of 900 = 900 ÷ 4 = **Rs. 225**.
- Total: 324 + 55 + 225 = **Rs. 604**.

MARKING SCHEME

✓ Eggs Rs. 324.
✓ Milk Rs. 55 and paneer Rs. 225.
✓ Total Rs. 604.

5 Which shop is cheaper?

ANSWER HA · 3

i. 450 ÷ 5 = **Rs. 90** per kg.
ii. **Shop B**. 5 kg at Shop A cost 5 × 95 = Rs. 475, so she saves 475 − 450 = **Rs. 25**.
iii. **Shop A**. At Shop B he must buy a whole bag, Rs. 450. At Shop A, 3 kg cost 3 × 95 = Rs. 285. A lower rate helps only if you need the whole bag.

MARKING SCHEME

✓ Rs. 90 per kg at Shop B.
✓ Shop B, saves Rs. 25.
✓ Shop A, Rs. 285 against Rs. 450.

6 Saving more

ANSWER A · 4

i. Income: 28,000 + 7,000 = **Rs. 35,000**. Expense: 14,000 + 6,500 + 8,000 + 4,500 = **Rs. 33,000**. Saving: 35,000 − 33,000 = **Rs. 2,000**.
ii. To save Rs. 5,000, the expense must be 35,000 − 5,000 = Rs. 30,000. That is 33,000 − 30,000 = Rs. 3,000 less than now. Others goes down by 4,500 − 2,000 = Rs. 2,500. So food must go down by the other 3,000 − 2,500 = Rs. 500: food becomes 14,000 − 500 = **Rs. 13,500**.

Check: 13,500 + 6,500 + 8,000 + 2,000 = 30,000, and 35,000 − 30,000 = 5,000. ✓

MARKING SCHEME

✓ Income Rs. 35,000 and expense Rs. 33,000.
✓ Saving Rs. 2,000.
✓ The expense must come down by Rs. 3,000.
✓ Food Rs. 13,500.

7 A festival month

ANSWER A · 4

i. 30,000 − 24,000 = **Rs. 6,000**.
ii. 24,000 + 18,000 = **Rs. 42,000**. The expense is bigger than the income, so the family is **short** by 42,000 − 30,000 = **Rs. 12,000**.
iii. Bhadra's Rs. 6,000 covers half of it. It must borrow 12,000 − 6,000 = **Rs. 6,000**.
iv. Income: 30,000 × 3 = Rs. 90,000. Expense: 24,000 + 42,000 + 24,000 = Rs. 90,000. They are **equal**: Kartik's saving of Rs. 6,000 just pays back the loan, and nothing is saved in the three months.

MARKING SCHEME

✓ Rs. 6,000 saved in Bhadra.
✓ Asoj: Rs. 42,000, short by Rs. 12,000.
✓ Borrow Rs. 6,000.
✓ Rs. 90,000 each: no saving in the three months.

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8 A trip with a grant

ANSWER A · 4

i. 24,000 + 28,800 + 19,200 + 8,000 = **Rs. 80,000**.

ii. The students pay 80,000 − 20,000 = Rs. 60,000. Each pays 60,000 ÷ 30 = **Rs. 2,000**.

iii.

Income	Rs.	Expense	Rs.
From 30 students	60,000	Bus	24,000
Grant from the school	20,000	Food	28,800
		Lodging	19,200
		Entry and guide	8,000
Total	**80,000**	**Total**	**80,000**

MARKING SCHEME

- ✓ Total expense Rs. 80,000.
- ✓ Rs. 60,000 shared by the students.
- ✓ Rs. 2,000 each.
- ✓ The budget, both sides Rs. 80,000.

9 Think: twice as much, ten more

ANSWER HA · 3

Twice as much: right. Each amount is quantity × rate. Twice the quantity makes every amount twice as big, so the total is 2 × 640 = Rs. 1,280.

Rates up by Rs. 10: wrong, unless he bought just one unit of one thing. Each unit costs Rs. 10 more. So 4 kg of rice alone costs 4 × 10 = Rs. 40 more. The bill goes up by 10 × the number of units on it, which is more than Rs. 10.

MARKING SCHEME

- ✓ Twice as much: right, every amount doubles.
- ✓ Ten more: wrong.
- ✓ Rs. 10 more for every unit, so more than Rs. 10 in all (an example).

10 Make your own

ANSWER HA · 3

Many bills are right. One of them:

Goods	Quantity	Rate (Rs.)	Amount (Rs.)
Notebook	4	60	240
Pen	6	25	150
Ruler	3	30	90
Eraser	2	10	20
Total			**500**

In words: **five hundred rupees only**. (Check any other bill by multiplying each row and adding.)

MARKING SCHEME

- ✓ At least three goods, at least 2 of each, every amount right.
- ✓ Total exactly Rs. 500.
- ✓ Total in words.

Marks by level	Knowledge	Understanding	Application	Higher ability	Total
Marks	0	4	23	9	**36**

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