Key focus

A budget records income (money coming in) against expenses (money going out) over a period of time. This objective builds financial-literacy skills in stages: calculating how much is spent, saved, or left over; finding a rate (a weekly, monthly, or per-person amount) by dividing a total; finding a percentage of a budget for one spending category, including reading spending shares from a bar or pie chart; and reasoning about a budget split by percentage or ratio, including reversing a percentage change (a discount or GST addition) to recover an original price. Not in the Beta Textbook – this is a Mana Maths-authored financial-literacy unit built on percentage-of-an-amount and percentage-increase/decrease skills students already have.

Suggested teaching sequence

1. Establish the core budget equation: amount left $=$ income $-$ expenses. Practise with a single expense, then several expenses added together.
2. Introduce rate problems: dividing a total budget by a number of weeks, people, or days to find an equal share.
3. Read a bar chart or pie chart of spending categories, including finding the total of two or more categories together.
4. Find a percentage of a budget for one category (e.g. 45% of \$400 for rent), and apply a percentage increase or decrease (a discount, or GST added) to a price.
5. Split a budget by ratio (e.g. rent:food:savings $= 5:3:2$) by dividing the total into parts.
6. Introduce reversing a percentage change: given the price AFTER a discount or GST addition, work backwards (divide, don't subtract/add a straight percentage) to find the original price.

Core examples to model

- Amount left: income \$150, expenses \$95 $\rightarrow$ saved $= 150 - 95 = \$55$.
- Rate: a \$540 camp budget shared by 6 students $\rightarrow$ \$90 each.
- Percentage of a budget: 45% of a \$400 budget $\rightarrow 400 \times 0.45 = \$180$.
- Percentage decrease: a \$60 jacket discounted $20\% \rightarrow 60 \times 0.8 = \$48$.
- Reversing a discount: a bike costs \$540 AFTER a 10% discount $\rightarrow$ original $= 540 \div 0.9 = \$600$ (not 540×1.1).
- Ratio split: a \$2000 budget in the ratio $5:3:2$ (10 parts total) $\rightarrow$ savings (2 parts) $= 2/10 \times 2000 = \$400$.

Watch for

- Reversing a percentage change by adding/subtracting the same percentage instead of dividing – a price that is \$540 after a 10% discount is NOT found by adding back 10% of \$540; divide by 0.9 instead, since the 10% discount was taken off the ORIGINAL price, not off \$540.

- Forgetting to add up ALL the expenses before subtracting from the budget, especially when three or more amounts are listed.
- Confusing ”how much is left” with ”how much was spent” – read the question carefully to see which one is being asked.
- Misreading a pie chart’s percentage as a dollar amount directly, instead of multiplying the percentage by the total income or budget.
- In a ratio split, dividing by the number of categories instead of the total number of parts (e.g. treating a $5 : 3 : 2$ split as three equal thirds).

Checks for understanding

- Can students calculate the amount left in a budget after one or more expenses?
- Can they divide a total budget to find a weekly, monthly, or per-person rate?
- Can they read a bar chart or pie chart of spending and combine two or more categories?
- Can they find a percentage of a budget for one category, and apply a percentage increase or decrease?
- Can they split a budget by ratio, and reverse a percentage change to find an original price?