

小六數學溫習摘要

Primary 6 Mathematics Revision Summary

6A1 簡易方程（二）

6A1 Simple Equations II

把數量關係寫成等式，逐步運用逆運算或合併同類項，最後把所求的值代回原式檢查。

Translate relationships into equations, simplify step by step and check the solution in the original equation.

學習重點

What to learn

- 同一未知數的倍數可合併，例如 $5x + 2x = 7x$ ；未知數與純數字不能直接合併。
Combine multiples of the same unknown: $5x + 2x = 7x$. Do not combine unlike terms.
- 括號表示一整組數量。解 $4(x + 3) = 44$ 時，可先在兩邊同除以 4。
Brackets form one group. For $4(x + 3) = 44$, divide both sides by 4 first.
- 方程中的係數可以是整數、分數、小數或百分數；仍須保持等號兩邊相等。
Coefficients may be whole numbers, fractions, decimals or percentages; keep both sides equal.
- 應用題先定義字母代表的數量，再按同一數量的兩種表達方式列方程。
Define the unknown quantity, then equate two expressions for the same amount.

考試前必記

Remember before a test

- 解方程可逐步撤銷加、減、乘、除的影響；每一步都在兩邊做相同運算。
Undo operations step by step, applying the same operation to both sides.
- 需要除以一個係數時，先確認它不是 0；分數係數也可用乘倒數消去。
A divisor must be non-zero. A fractional coefficient can be removed by multiplying by its reciprocal.
- 百分數先按它的數值理解，例如 $35\%x$ 表示 $0.35x$ ，不是 $35x$ 。
Interpret percentage coefficients correctly: $35\%x$ means $0.35x$, not $35x$.
- 驗算應使用原方程。應用題還要檢查答案是否符合人數、長度等實際條件。
Check the original equation and whether the result makes sense for the quantity involved.

常見錯誤

Common mistakes

- 把 $3(x + 4)$ 寫成 $3x + 4$ ，漏乘括號中的另一項。
Expanding $3(x + 4)$ as $3x + 4$ instead of $3x + 12$.
- 把 $x + x$ 誤作 x^2 ；這裏是兩個 x 相加，應是 $2x$ 。
Writing $x + x$ as x^2 rather than $2x$.
- 同一字母在題目不同位置代表不同數量，令所列方程沒有一致意思。
Using the same letter for different quantities in one equation.
- 算出字母的值便停下來，沒有回答題目真正要求的數量。
Stopping at the unknown's value without answering the requested quantity.

快速自查

Quick check

☐ 能合併同一未知數的倍數 I can combine multiples of one unknown.	☐ 能逐步處理含括號的方程 I can solve equations with brackets.
☐ 能處理分數、小數和百分數係數 I can work with different coefficient forms.	☐ 能代回原式並寫完整答句 I can check and write a complete answer.

自編例題

Original worked example

三套工具的價錢相同，每套另加 4 元包裝費，合共 87 元。每套工具本身售多少元？

Three tool sets have the same price. Packaging costs an extra \$4 per set, and the total is \$87. What is the price of each set before packaging?

思考與解答：設每套工具售 x 元。 $3(x + 4) = 87$ ； $x + 4 = 29$ ； $x = 25$ 。驗算： $3 \times (25 + 4) = 87$ 。每套工具售 25 元。

Reasoning and answer: Let each set cost \$ x . Then $3(x + 4) = 87$; $x + 4 = 29$; $x = 25$. Check: $3 \times (25 + 4) = 87$. Each tool set costs \$25.

再試與答案：解 $0.6y + 3 = 18$ 。答案： $0.6y = 15$ ， $y = 25$ 。

Further practice and answer: Solve $0.6y + 3 = 18$. Answer: $0.6y = 15$, so $y = 25$.