

小六數學溫習摘要

Primary 6 Mathematics Revision Summary

6N1 小數 (四)

6N1 Decimals IV

計算小數除法時，先把除數整理成容易計算的形式，再處理商的小數點、餘數及混合運算。

Make the divisor easier to work with, then check the decimal point, remainder and order of operations.

學習重點

What to learn

- 除以 10、100、1000，相當於把小數點向左移 1、2、3 位；位數不足時補 0。
Dividing by 10, 100 or 1000 moves the decimal point left by 1, 2 or 3 places; insert zeros when needed.
- 除以 0.1、0.01、0.001，分別等於乘 10、100、1000。
Dividing by 0.1, 0.01 or 0.001 is equivalent to multiplying by 10, 100 or 1000.
- 把被除數和除數同乘一個非零數，商不變；可藉此把小數除數化為整數。
Multiplying both numbers in a division by the same non-zero number leaves the quotient unchanged.
- 四則混合運算先做括號內，再做乘除，最後做加減；同級運算按由左至右的次序。
Evaluate brackets, then multiplication and division, then addition and subtraction; work left to right within a level.

考試前必記

Remember before a test

- 例： $5.46 \div 0.6$ 可改成 $54.6 \div 6$ ，兩個數的小數點必須一起移動。
For example, $5.46 \div 0.6$ becomes $54.6 \div 6$; adjust both numbers together.
- 整數除法有餘數時，可在被除數的小數部分補 0 繼續除；商的小數點須對準被除數的小數點。
Continue division with decimal zeros when necessary. Align the quotient's decimal point with the dividend's.
- 先估商的大約大小。正數除以介乎 0 和 1 的數，商會比被除數大。
Estimate first. Dividing a positive number by a number between 0 and 1 makes it larger.
- 「最多完整分成幾份」要取整數份數；餘量可用原有總量減去已用總量求出。
For complete groups, use a whole-number count. Find the leftover amount from the original quantities.

常見錯誤

Common mistakes

- 只改除數的小數點，卻保持被除數不變，令商改變。
Changing the divisor alone changes the quotient.
- 把除法餘數的小數點照抄自放大後的算式，沒有換回原來單位的數值。
Reading a scaled remainder without converting it back to the original quantity.
- 需要完整包數時把商四捨五入，結果超出可分配的總量。
Rounding up the number of complete packs beyond the available amount.
- 過早把中途答案湊整，或漏寫近似值符號及所需單位。
Rounding intermediate values too early, or omitting approximation signs and units.

快速自查

Quick check

☐ 能同時調整被除數和除數 I can scale both numbers together.	☐ 能估計商的大小 I can estimate a quotient.
☐ 能正確處理完整份數和餘量 I can find complete groups and leftovers.	☐ 能按次序計算混合算式 I can follow the order of operations.

自編例題

Original worked example

一桶顏料有 8.7 L，每個小罐可裝 0.65 L。最多可裝滿多少罐，還剩多少升？

A bucket contains 8.7 L of paint. Each small tin holds 0.65 L. How many tins can be filled completely, and how many litres remain?

思考與解答： $0.65 \times 13 = 8.45$ ， $0.65 \times 14 = 9.1$ ，所以最多裝滿 13 罐；餘下 $8.7 - 8.45 = 0.25$ L。

Reasoning and answer: $0.65 \times 13 = 8.45$ and $0.65 \times 14 = 9.1$, so at most 13 tins can be filled. The remainder is $8.7 - 8.45 = 0.25$ L.

再試與答案：計算 $7.56 \div 0.9 + 1.8$ 。答案： $8.4 + 1.8 = 10.2$ 。

Further practice and answer: Calculate $7.56 \div 0.9 + 1.8$. Answer: $8.4 + 1.8 = 10.2$.