小五數學溫習摘要

Primary 5 Mathematics Revision Summary

5N4 小數（三）

5N4 Decimals III

學習小數乘法和小數點移動規律，並能估算和解答小數乘法應用題。

Learn decimal multiplication, understand how the decimal point moves, estimate answers and solve word problems.

學習重點

What to learn

- 計算一個數乘 10、100、1000，以及乘 0.1、0.01、0.001。
  Multiply a number by 10, 100 or 1000, and by 0.1, 0.01 or 0.001.
- 進行小數乘整數和小數乘小數，理解積的小數位數。
  Multiply a decimal by a whole number and multiply two decimals. Understand how many decimal places the product has.
- 先估一估答案大概有多大，再檢查小數點有沒有放錯。
  Estimate how large the answer should be and use this to check the decimal point.
- 按照價錢、長度、面積等題目內容列出小數乘法算式。
  Write decimal multiplication calculations for problems about money, length or area.

考試前必記

Remember before a test

- 正數乘 10、100、1000 時，小數點右移 1、2、3 位；乘 0.1、0.01、0.001 時則左移。
  For a positive number, multiplying by 10, 100 or 1000 moves the decimal point right by 1, 2 or 3 places; 0.1, 0.01 or 0.001 moves it left.
- 直式先按整數乘法計算，再按兩個因數小數位數的總和點上小數點。
  Multiply as if the numbers were whole numbers first. Then count the total decimal places in both factors and place the decimal point in the product.
- 小數部分末尾的 0 可刪去而不改變數值，例如 1.20 = 1.2；1.02 中間的 0 不可刪去。
  Trailing decimal zeros can be removed: 1.20 = 1.2. The zero inside 1.02 cannot be removed.
- 先把因數取合適的近似值來估算，例如 4.9 × 2.1 約為 5 × 2 = 10。
  Round factors to convenient values. For example, 4.9 × 2.1 is about 5 × 2 = 10.

常見錯誤

Common mistakes

- 乘 0.1、0.01 或 0.001 時把小數點移錯方向，或位數不足時漏補 0。
  Moving the decimal point the wrong way when multiplying by 0.1, 0.01 or 0.001, or failing to insert zeros.
- 沿用小數加減法的對齊方法。乘法可先忽略小數點，按整數乘法把末位對齊計算。
  Using decimal-addition alignment. Ignore decimal points initially and align the last digits as in whole-number multiplication.
- 把兩個因數的小數位數相加錯，令積的小數點位置錯誤。
  Counting the decimal places in the two factors incorrectly and placing the decimal point in the wrong position.
- 正數乘以小於 1 的正數後，所得答案卻比原數大，仍沒有重新檢查。
  Getting a larger answer after multiplying by a positive number smaller than 1 and not noticing the problem.

快速自查

Quick check

□ 能說出乘 0.1 後答案會怎樣改變 I can say what happens after multiplying by 0.1.	□ 能正確決定積的小數點位置 I can place the decimal point in the product correctly.
□ 能計算小數乘小數 I can multiply two decimals.	□ 能用估算檢查小數點位置 I can use estimation to check the decimal point.