

# 專項提優 - 巧算乘法

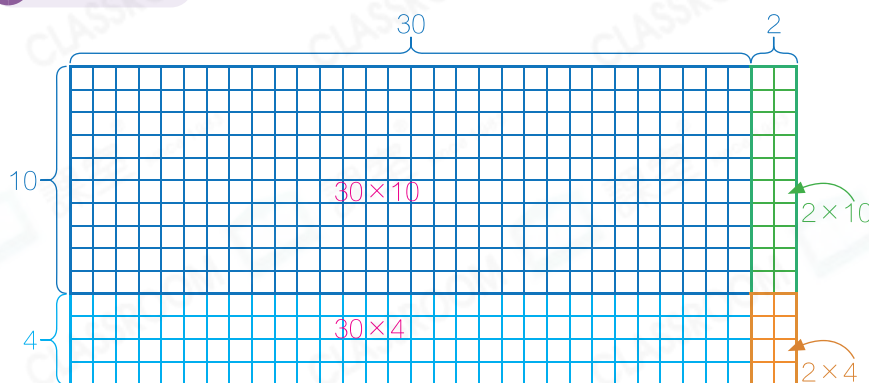
## 提優課堂

### 技巧 1

兩個數相乘，先寫成整十與幾的和相乘的形式，然後用以下公式展開計算。  
 $(a + b) \times (c + d) = a \times c + a \times d + b \times c + b \times d$

例  $32 \times 14 = \underline{\quad 448 \quad}$

### 過程拆解



$$\begin{aligned} 32 \times 14 &= (30 + 2) \times (10 + 4) \\ &= 30 \times 10 + 30 \times 4 + 2 \times 10 + 2 \times 4 \\ &= 300 + 120 + 20 + 8 \\ &= 448 \end{aligned}$$

### 技巧 2

兩位數乘兩位數：若十位數字相同，個位數字相加等於 10。  
 積 =  $(\text{十位數字} + 1) \times \text{十位數字}$   $\times$   $\text{個位數字} \times \text{個位數字}$

例 (a)  $24 \times 26 = \underline{\quad 624 \quad}$       (b)  $71 \times 79 = \underline{\quad 5609 \quad}$

### 過程拆解

$$\begin{aligned} \text{(a)} \quad (2 + 1) \times 2 &= 6 \\ 4 \times 6 &= 24 \\ 24 \times 26 &= 624 \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad (7 + 1) \times 7 &= 56 \\ 1 \times 9 &= 9 \leftarrow \text{個位數字的積是一位數，須補 0} \\ 71 \times 79 &= 5609 \end{aligned}$$

### 技巧 3

一個數與 11 相乘，首尾不動，相鄰之和中間插，相鄰之和如滿十，須向前進位。

例 (a)  $53 \times 11 = \underline{\quad 583 \quad}$       (b)  $678 \times 11 = \underline{\quad 7458 \quad}$

### 過程拆解

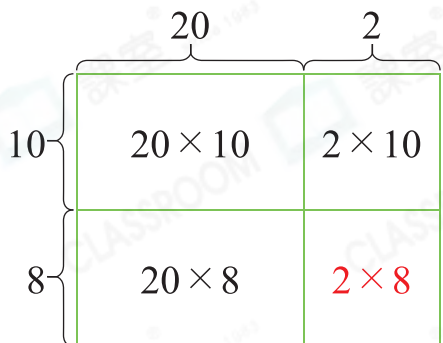
$$\begin{array}{c} \text{(a)} \quad \begin{array}{c} 5 \quad 3 \\ \swarrow \quad \searrow \\ 5 \quad 8 \quad 3 \end{array} \times 11 \\ = 583 \end{array}$$

$$\begin{array}{c} \text{(b)} \quad \begin{array}{c} 6 \quad 7 \quad 8 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 6 \quad 13 \quad 15 \quad 8 \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ 1 \quad 3 \quad 5 \quad 8 \\ 1 \quad 4 \quad 5 \quad 8 \end{array} \times 11 \\ = 7458 \end{array}$$

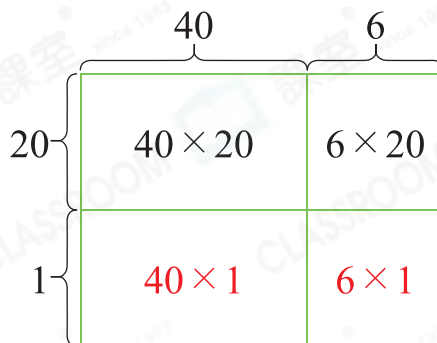
# 及時仿練

計算下列各題。

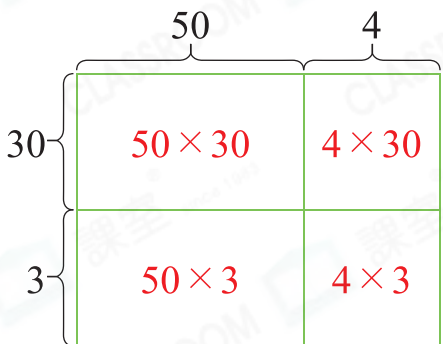
1.  $22 \times 18 = \underline{\quad 396 \quad}$



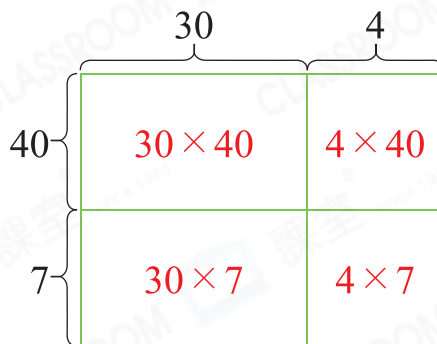
2.  $46 \times 21 = \underline{\quad 966 \quad}$



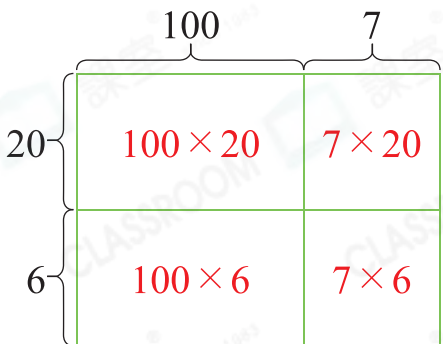
3.  $54 \times 33 = \underline{\quad 1782 \quad}$



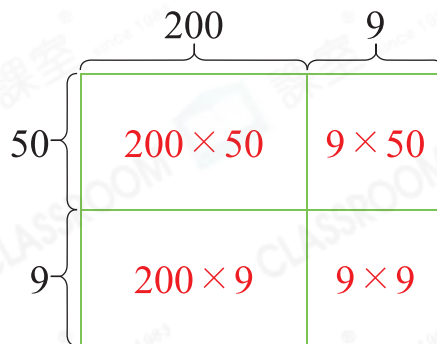
4.  $34 \times 47 = \underline{\quad 1598 \quad}$



5.  $107 \times 26 = \underline{\quad 2782 \quad}$



6.  $209 \times 59 = \underline{\quad 12331 \quad}$



7.  $12 \times 18 = \underline{\quad 216 \quad}$

8.  $29 \times 21 = \underline{\quad 609 \quad}$

9.  $33 \times 37 = \underline{\quad 1221 \quad}$

10.  $34 \times 11 = \underline{\quad 374 \quad}$

11.  $127 \times 11 = \underline{\quad 1397 \quad}$

12.  $295 \times 11 = \underline{\quad 3245 \quad}$