

乘法公式的基礎練習

班級：_____ 姓名：_____ 座號：_____

$$(a+b) \times (c+d) = \underline{\hspace{2cm}}$$

$$(a+b)^2 = \underline{\hspace{2cm}}, \quad (a-b)^2 = \underline{\hspace{2cm}}, \quad (a+b)(a-b) = \underline{\hspace{2cm}}.$$

練習一、利用乘法公式計算下列各題：

$$(1) 303 \times 295 = \underline{\hspace{2cm}}$$

$$(2) 52 \times 45 = \underline{\hspace{2cm}}$$

$$(3) 37^2 + 2 \times 37 \times 63 + 63^2 = \underline{\hspace{2cm}}$$

$$(4) 12^2 + 2 \times 12 \times 23 + 23^2 = \underline{\hspace{2cm}}$$

$$(5) 81^2 + 2 \times 81 \times 19 + 19^2 = \underline{\hspace{2cm}}$$

$$(6) 13^2 + 2 \times 13 \times 7 + 7^2 = \underline{\hspace{2cm}}$$

$$(7) \left(3\frac{1}{6}\right)^2 + 2 \times 3\frac{1}{6} \times 6\frac{5}{6} + \left(6\frac{5}{6}\right)^2 = \underline{\hspace{2cm}}$$

$$(8) \left(37\frac{2}{7}\right)^2 + 2 \times 37\frac{2}{7} \times 2\frac{5}{7} + \left(2\frac{5}{7}\right)^2 = \underline{\hspace{2cm}}$$

$$(9) 7.66^2 + 2 \times 7.66 \times 7.34 + 7.34^2 = \underline{\hspace{2cm}}$$

$$(10) 9.27^2 + 2 \times 9.27 \times 1.73 + 1.73^2 = \underline{\hspace{2cm}}$$

練習二、利用乘法公式計算下列各題：

(1) $125^2 - 2 \times 125 \times 25 + 25^2 =$ _____

(2) $17^2 - 2 \times 17 \times 2 + 2^2 =$ _____

(3) $52^2 - 2 \times 52 \times 12 + 12^2 =$ _____

(4) $73^2 - 2 \times 73 \times 3 + 3^2 =$ _____

(5) $(3\frac{2}{9})^2 - 2 \times 3\frac{2}{9} \times \frac{2}{9} + (\frac{2}{9})^2 =$ _____

(6) $(2\frac{3}{7})^2 - 2 \times 2\frac{3}{7} \times \frac{3}{7} + (\frac{3}{7})^2 =$ _____

(7) $7.32^2 - 2 \times 7.32 \times 2.32 + 2.32^2 =$ _____

(8) $7.53^2 - 2 \times 7.53 \times 2.53 + 2.53^2 =$ _____

(9) $8.66^2 - 2 \times 8.66 \times 1.66 + 1.66^2 =$ _____

(10) $23.8^2 - 2 \times 23.8 \times 3.8 + 3.8^2 =$ _____

(11) $52^2 - 104 \times 12 + 12^2 =$ _____

(12) $17.72^2 - 35.42 \times 1.72 + 1.72^2 =$ _____

練習三、利用乘法公式計算下列各題

(1) $503 \times 497 = ?$

(2) $43 \times 57 = ?$

(3) $101 \times 99 = ?$

(4) $71^2 - 11^2 = ?$

(5) $63^2 - 3^2 = ?$

(7) $79^2 - 29^2 = ?$

(8) $(16\frac{3}{5})^2 - (3\frac{2}{5})^2 = ?$

(9) $(7\frac{2}{11})^2 - (2\frac{2}{11})^2 = ?$

(10) $(32\frac{1}{2})^2 - (2\frac{1}{2})^2 = ?$

練習四、綜合測驗

(1) 若 $(999.5)^2 = 999^2 + a$ ，則 $a = ?$

(2) 若 $(899.5)^2 = 899^2 + b$ ，則 $b = ?$

(3) $1\frac{19}{20} \times 2\frac{1}{20} = ?$

(4) $1989 \times 2011 = ?$

(5) $1006 \times 994 = ?$

(6) 下列哪一個式子是正確的? 答: _____

(A) $(a+b)^2 = a^2 + b^2$ (B) $(5-2)^2 = 5^2 - 2^2$ (C) $(6-4)^2 = 6^2 - 2 \times 6 \times 4 + 4^2$

(D) $(x-y)^2 = x^2 - 2xy - y^2$

(7) 設 $a = 207 \times 193$, $b = 193^2 - 192^2$, 則 $a - b =$ _____

(8) 設 $a + b = 5$, $ab = 3$, 求 (A) $a^2 + b^2 =$ _____ (B) $3a^2 - 5ab + 3b^2 =$ _____

(9) 設 $a - b = 4$, $ab = 5$. 求 (A) $a^2 + b^2 =$ _____ (B) $4a^2 - 7ab + 4b^2 =$ _____

(10) 若 $973 \times b = 1000^2 - 27^2$, 則 $b =$ _____.