

Multiplying Two Numbers Whose One's Digits Are The Same And Whose Ten's Digits Add To 10:

A. From algebra we learn:

$$(10a + b)(10(10 - a) + b) = 100[(a)(10 - a) + b] + b^2$$

B. Using numbers instead of variables we get the following rules:

1. Square the one's digit. Write this number down (make sure the number takes up 2 place values).
2. Multiply the ten's digits together and add to the one's digit. Write the result.

Ex [1] $33 \times 73 = \underline{\hspace{2cm}}$.

- a) $3^2 = 9$. Write 09 to take up 2 places.
- b) $3 \times 7 + 3 = 24$. Write 24.
- c) The answer is 2409.

Ex [2] $49 \times 69 = \underline{\hspace{2cm}}$.

- a) $9^2 = 81$. Write 81.
- b) $4 \times 6 + 9 = 33$. Write 33.
- c) The answer is 3381.