Squaring A Number Ending In 9:

A. This method comes from algebra:

$$(10a - 1)^2 = 100(a)(a - 1) + 10(8a) + 1$$

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

1. Write down 1.
2. Add 1 to the ten's digit and multiply by 8. Write this number down, carry if necessary.
3. Multiply the number in the ten's digit by that number plus 1. Write this result.

Ex [1] 79^2 =_____.

a) Write down 1.

b) 8 x (7 + 1) = 64. Write 4, carry *6.

c) 7 x (7 + 1) = 56 + *6 = 62. Write 62.

d) The answer is 6241.

Ex [2] 249^2 =_____.

a) Write down 1.

b) 8 x (24 + 1) = 200. Write 0, carry *20. See *Multiplying by 25*.

c) 24 x (24 + 1) = 600 + *20 = 620. Write 620. See *Multiplying by 25*.

d) The answer is 62001.