Squaring A Number Ending In 7:

A. This method comes from algebra:

$$(10a - 3)^2 = 100(a)(a - 1) + 10(4a) + 9$$

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

1. Write down 9.
2. Add 1 to the ten's digit and multiply by 4. 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] 37^2 =_____.

a) Write down 9.

b) 4 x (3 + 1) = 16. Write 6, carry *1.

c) 3 x (3 + 1) = 12 + *1 = 13. Write 13.

d) The answer is 1369.

Ex [2] 87^2 =_____.

a) Write down 9.

b) 4 x (8 + 1) = 36. Write 6, carry *3.

c) 8 x (8 + 1) = 72 + *3 = 75. Write 75.

d) The answer is 7569.