Difference of Two Squares

We know the expansion rule: $\left(a+b\right)\left(a-b\right)=a^{2}-b^{2}$

We can extend this to arithmetic multiplications to help solve difficult product questions easily.

Example: Let us first look at a simple multiplication say

 $7×9$

This may be written

$$\left(8-1\right)(8+1)$$

This simplifies to give:

$$8^{2}-1^{2}=64-1$$

Answer 63.

You will need to know your square table to make good use of this technique.

Example 2

 $101×99$

 $\left(100+1\right)\left(100-1\right)$

 $100^{2}-1^{2}$

 $10000-1$

Answer: 9999

Try these

1. 49 x 51
2. 501 x 499
3. 98 x 102
4. 105 x 95
5. 90 x 110
6. 63 x 77
7. 213 x 187
8. 550 x 450