**Practise Multiplying by Powers of Ten ~**

40 X 300 = (4 X 3) = 12. Then place the number of zeros in the question (3 zeros) behind the 12, to get:

40 X 300 = 12 000.

This skill is also very useful for estimation.

**Example: Calculating 478 X 334.**

* *Round 478 (maybe using the Vertical Number Line) to 500.*
* *Round 334 to 300 and now use multiplying by powers of ten to estimate the answer to 500 X 300 = 150 000!*
* *Teaching this way of estimating makes students feel powerful in their calculations and builds awesome Mental Math skills.*

Use these skills of multiplying by powers of ten to guide students through the real meaning of double digit multiplication and to help them use mental math to complete the expanded form solution:

First estimate the answer to 45 X 23,

45 (round up) X 23 (round down) ~ 50 X 20 = 1000

**45 (40 + 5)**

**X 23 (20 + 3)**

**15 (3 X 5)**

**120 (3 X 40)**

**100 (20 X 5)**

**800 (20 X 40)**

**1035**