Partitioning

Partition the larger number and multiply each part by the smaller number.

Then add the answers together

E.g. 8 x 348 =

Partition: 348 = 300 + 40 + 8

300 x 8 = 2400 (3 hundred x 8 = 24 hundred)

40 x 8 = 320 (4 tens x 8 = 32 tens)

8 x 8 = 64

Now add the answers together.

2400 + 320 + 64 =

$$\begin{array}{r} 2400 \\ 320 \\ 64 \\ \hline 2784 \end{array}$$

Rounding

Round one of the numbers up or down and then adjust your answer by subtracting or adding 'lots' of the other number.

E.g.

18 x 46 = 18 rounds up to 20 (by adding 2)

20 x 46 = 2 x 10 x 46 = 2 x 460 = 800 + 120 = 920

I've found 20 lots of 46. I need 18 lots of 46 so I need to subtract 2 lots of 46.

2 x 46 = 92 920 - 92 = 920 - 100 + 8 = 828

33 x 26 = 33 rounds down to 30 (by subtracting 3)

30 x 26 = 10 x 3 x 26 = 10 x 78 = 780

I've found 30 lots of 26. I need 33 lots of 26 so I need to add 3 lots of 26.

3 x 26 = 78

780 + 78 = 800 + 58 = 858

Grid method

Partition both numbers into their place-value columns and write each part in its own row or column:

47 x 356 = (40 + 7) x (300 + 50 + 6)

Multiply the number at the start of a row by each number across the top e.g. 40 x 300 40 x 50 40 x 6 and write the answers in the grid

Add up the answers using column method and write at the bottom of the grid.

Add together the answers to your additions e.g. 14100 + 2350 + 282

x	300	50	6	
40	12000	2000	240	
7	2100	350	42	
	14100	2350	282	16732

Chunking

Find 1x , 5x , 10x, 50x , 100x one of the numbers. Use these amounts to find the correct number of lots of this number.

E.g. 76 x 38

1 x 38 = 38

10 x 38 = 380

5 x 38 = 190 (half of 10x)

100 x 38 = 3800

50 x 38 = 1900 (ten times 5 x 38)

I need 76 lots of 38. 76 = 50 + 10 + 10 + 5 + 1

76 lots of 38 = 1900 + 380 + 380 + 190 + 38

1	9	0	0
	3	8	0
	3	8	0
	1	9	0
		3	8
2	8	8	8

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