Multiplication and Division Strategies

USE A KNOWN FACT (BENCHMARKS)

FACT

4 x 5 = 20

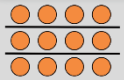
so

4 x 6 → 20 + 4

USE THE INVERSE

If 3 x 4 = 12

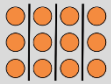
12 ÷ 3 = 4



12 ÷ 4

If 4 x 3 = 12

12 ÷ 4 = 3



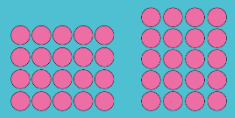
"I know that three fours are twelve so the answer is 3"

COMMUTATIVE LAW

5 x 4 = 20

so

4 x 5 = 20

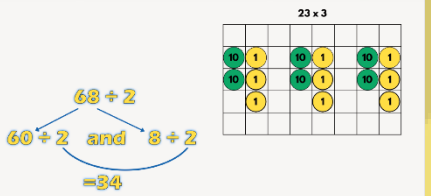


PLACE VALUE

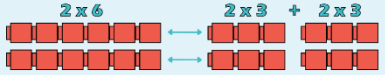
If I know 7 x 10 I can work out 7 x 100

If I know 700 ÷ 100 I can work out 700 ÷ 10

SPLIT



DISTRIBUTE PROPERTY



72 ÷ 6 → 60 ÷ 6 = 10 and 12 ÷ 6 = 2 → 12

ASSOCIATIVE PRINCIPLE

When you multiply you can group the numbers in any combination.

(6 x 5) x 7 = 6 x (5 x 7)

(30) x 7 = 6 x (35)

210 = 210

DIVISION IS NOT ASSOCIATIVE

GRID METHOD

Multiplication 132 x 6

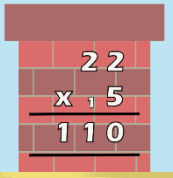
	100	30	2
6	600	180	12

Division 792 ÷ 6

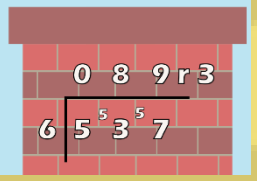
	100	30	2
6	600	180	12

STANDARD WRITTEN METHOD

Multiplication 22 x 5



Division 537 ÷ 6



EXPANDED METHOD OF MULTIPLICATION

38 x 7

210 (30 x 7)

56 (8 x 7)

266

DIVISION BY CHUNKING

537

- 300 (50 x 6)

237

- 180 (30 x 6)

57

- 54 (9 x 6)

3

537 ÷ 6 by chunking

50 + 30 + 9 = 89

537 ÷ 6 = 89 r 3

Dumfries & Galloway Council