## Multiplication and Division

## Knowledge Organiser

Key Vocabulary	Sharing and Grouping	Multiplication and Divi	sion Facts (3, 4 and 8	multiplication table
times tables sharing	$12 \div 4 = 3$ $12 \text{ counters are}$	3 × Tables	ι, × Tα <i>ble</i> s	<sub>8 ×</sub> Tables
grouping	shared equally between 4 children.			
equal groups	between 4 children.	$1 \times 3 = 3$ $3 \div 3 = 1$ $2 \times 3 = 6$ $6 \div 3 = 2$	$1 \times 4 = 4$ $4 \div 4 = 1$ $2 \times 4 = 8$ $8 \div 4 = 2$	$1 \times 8 = 8$ $8 \div 8 = 1$ $2 \times 8 = 16$ $16 \div 8 = 2$
multiple	12 counters are	$3 \times 3 = 9$ $9 \div 3 = 3$	$3 \times 4 = 12$ $12 \div 4 = 3$	$2 \times 8 = 10$ $16 \div 8 = 2$ $3 \times 8 = 24$ $24 \div 8 = 3$
multiply by	grouped into	4 × 3 = 12 12 ÷ 3 = 4	4 × 4 = 16 16 ÷ 4 = 4	$4 \times 8 = 32$ $32 \div 8 = 4$
divide by	packs of 4.	5 × 3 = 15 15 ÷ 3 = 5	5 × 4 = 20 20 ÷ 4 = 5	5 × 8 = 40 40 ÷ 8 = 5
•	Multiples of 2, 4 and 8	6 × 3 = 18 18 ÷ 3 = 6	6 × 4 = 24 24 ÷ 4 = 6	6 × 8 = 48 48 ÷ 8 = 6
array		7 × 3 = 21 21 ÷ 3 = 7	7 × 4 = 28 28 ÷ 4 = 7	7 × 8 = 56 56 ÷ 8 = 7
fact families	2 4 6 8 10 12 14 16 18 20 22 24	8 × 3 = 24 24 ÷ 3 = 8	8 × 4 = 32 32 ÷ 4 = 8	8 × 8 = 64 64 ÷ 8 = 8
regrouping		9 × 3 = 27 27 ÷ 3 = 9	9 × 4 = 36 36 ÷ 4 = 9	9 × 8 = 72 72 ÷ 8 = 9
515	- 4 8 12 16 20 24 28 32 36 40 44 48	10 × 3 = 30 30 ÷ 3 = 10 11 × 3 = 33 33 ÷ 3 = 11	10 × 4 = 40 40 ÷ 4 = 10 11 × 4 = 44 44 ÷ 4 = 11	10 × 8 = 80 80 ÷ 8 = 10 11 × 8 = 88 88 ÷ 8 = 11
		$11 \times 3 = 33$ $33 \div 3 = 11$ $12 \times 3 = 36$ $36 \div 3 = 12$	$11 \times 4 = 44$ $44 \times 4 = 11$ $12 \times 4 = 48$ $48 \div 4 = 12$	$11 \times 8 = 96$ $88 \div 8 = 11$ $12 \times 8 = 96$ $96 \div 8 = 12$
	8 16 24 32 40 48 56 64 72 80 88 96			
	Doubling the 2 times table is equal to the 4 times table. Doubling the 4 times table is equal to the 8 times table.			
	Fact Families	Related Cal	culations	
			4 = 12	4 × 3 = 12
	32 ÷ 8 = 4       32 ÷ 4 = 8       15 ÷ 3 = 5       15	÷ 5 = 3		
		30 × 4	+ = 120	40 × 3 = 120
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