

Multiplication and Division

Knowledge Organiser

Key Vocabulary

times tables

multiply by

divide by

array

fact families

regrouping

Multiplication and Division Facts (3, 4 and 8 multiplication tables)

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

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3 x Tables

$1 \times 3 = 3$	
$2 \times 3 = 6$	
$3 \times 3 = 9$	$3 \div 3 = 1$
$4 \times 3 = 12$	$6 \div 3 = 2$
$5 \times 3 = 15$	$9 \div 3 = 3$
$6 \times 3 = 18$	$12 \div 3 = 4$
$7 \times 3 = 21$	$15 \div 3 = 5$
$8 \times 3 = 24$	$18 \div 3 = 6$
$9 \times 3 = 27$	$21 \div 3 = 7$
	$24 \div 3 = 8$
	$27 \div 3 = 9$
	$30 \div 3 = 10$
	$33 \div 3 = 11$
	$36 \div 3 = 12$

4 x Tables

$1 \times 4 = 4$	
$2 \times 4 = 8$	
$3 \times 4 = 12$	$4 \div 4 = 1$
$4 \times 4 = 16$	$8 \div 4 = 2$
$5 \times 4 = 20$	$12 \div 4 = 3$
$6 \times 4 = 24$	$16 \div 4 = 4$
$7 \times 4 = 28$	$20 \div 4 = 5$
$8 \times 4 = 32$	$24 \div 4 = 6$
$9 \times 4 = 36$	$28 \div 4 = 7$
$10 \times 4 = 40$	$32 \div 4 = 8$
$11 \times 4 = 44$	$36 \div 4 = 9$
$12 \times 4 = 48$	$40 \div 4 = 10$
	$44 \div 4 = 11$
	$48 \div 4 = 12$

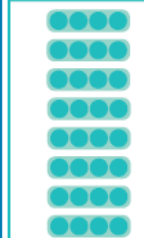
8 x Tables

$1 \times 8 = 8$	
$2 \times 8 = 16$	
$3 \times 8 = 24$	$8 \div 8 = 1$
$4 \times 8 = 32$	$16 \div 8 = 2$
$5 \times 8 = 40$	$24 \div 8 = 3$
$6 \times 8 = 48$	$32 \div 8 = 4$
$7 \times 8 = 56$	$40 \div 8 = 5$
$8 \times 8 = 64$	$48 \div 8 = 6$
$9 \times 8 = 72$	$56 \div 8 = 7$
$10 \times 8 = 80$	$64 \div 8 = 8$
$11 \times 8 = 88$	$72 \div 8 = 9$
$12 \times 8 = 96$	$80 \div 8 = 10$
	$88 \div 8 = 11$
	$96 \div 8 = 12$

Write and Calculate Mathematical Statements

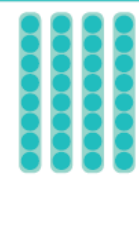
$$4 \times 8 = 32$$

$$32 \div 8 = 4$$



$$8 \times 4 = 32$$

$$32 \div 4 = 8$$



$$5 \times 3 = 15$$

$$15 \div 3 = 5$$



$$3 \times 5 = 15$$

$$15 \div 5 = 3$$



Related Calculations

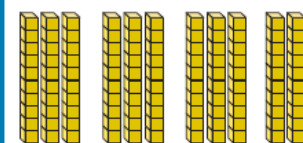
$$3 \times 4 = 12$$



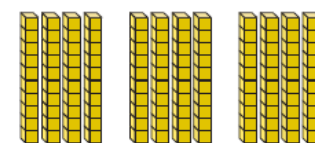
$$4 \times 3 = 12$$



$$30 \times 4 = 120$$



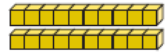
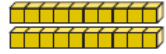
$$40 \times 3 = 120$$



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Knowledge Organiser

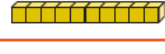
Written Multiplication Methods - No Regrouping

Tens	Ones
	
	
	

$$23 \times 3 = 69$$

	T	O
	2	3
×		3
	6	9

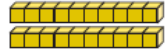
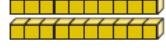
Written Multiplication Methods - With Regrouping

Tens	Ones
	
	
	
	

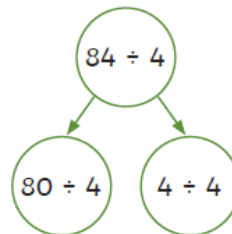
$$24 \times 4 = 96$$

	T	O
	2	4
×		4
	9	6
	1	

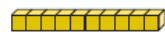
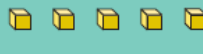
Written Division Methods - No Regrouping

Tens	Ones
	
	
	
	

	2	1
4	8	4



Written Division Methods - With Regrouping

Tens	Ones
	
	
	

	1	5
3	4	¹ 5

