

Mathematics

Securing multiplication facts: The nine times table Worksheet

Mr Ward



Warm up - Multiple Mystery!

Can you use your knowledge of the 3x multiplication table to identify the multiples of 3

366

64

23

45

940

201

53

74

452

525

6

12

738



Exploring patterns in the 9x table

Always, sometimes, never

x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10
0	9	18	27	36	45	54	63	72	81	90

$$1 + 8 = 9$$

$$2 + 7 = 9$$

$$3 + 6 = 9$$

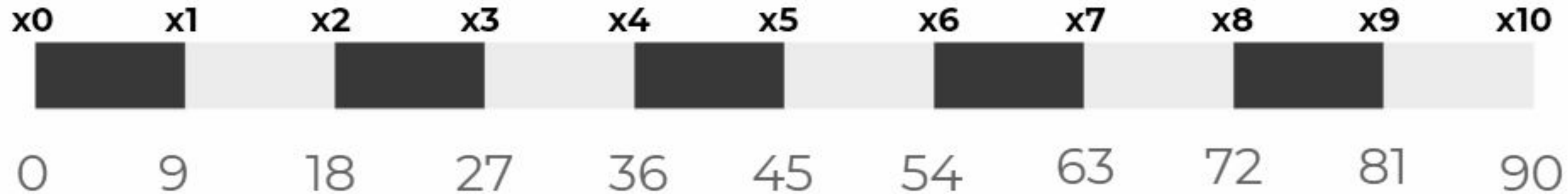
9....18....27.... If a number is a multiple of nine, all the digits will add together to make nine.

Is Greg correct?



Exploring patterns in the 9x table

Always, sometimes, never



$$2 \times 9$$

$$(2 \times 10) - 2$$

$$20 - 2 = 18$$

Another way to multiply
by nine is to multiply by
10 and subtract one
group.

Is Greg right this time?



Multiplication mischief - Swap the digits!

1. Each equation is incorrect because two digits have swapped position.
2. Identify which two digits need to be swapped to create a correct multiplication equation.
3. Use a one of the different tricks and strategies shown to check answer is right!

For example $6 \times 9 = 73$ I need to swap the 6 and the 7.


$$6 \times 9 = 73 \rightarrow 7 \times 9 = 63$$

$$9 \times 1 = 89$$

$$37 = 2 \times 9$$

$$90 \div 1 = 90$$

$$3 \times 9 = 67$$

$$28 \div 9 = 1$$

$$289 = 11 \times 9$$

$$9 = 91 \div 91$$

$$46 = 9 \times 3$$

$$55 \div 4 = 9$$

$$59 = 6 \times 4$$

$$78 \div 9 = 2$$

$$82 \times 9 = 101$$



Supporting resources

<u>Nine times table</u>	
$0 \times 9 = 0$	$9 \div 9 = 0$
$1 \times 9 = 9$	$9 \div 9 = 1$
$2 \times 9 = 18$	$18 \div 9 = 2$
$3 \times 9 = 27$	$27 \div 9 = 3$
$4 \times 9 = 36$	$36 \div 9 = 4$
$5 \times 9 = 45$	$45 \div 9 = 5$
$6 \times 9 = 54$	$54 \div 9 = 6$
$7 \times 9 = 63$	$63 \div 9 = 7$
$8 \times 9 = 72$	$72 \div 9 = 8$
$9 \times 9 = 81$	$81 \div 9 = 9$
$10 \times 9 = 90$	$90 \div 9 = 10$
$11 \times 9 = 99$	$99 \div 9 = 11$
$12 \times 9 = 108$	$108 \div 9 = 12$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Challenge Slide

Jenna has put the nine times table in order in a line

09182736455463728190

What do you notice? Discuss this with someone.

(There are two patterns I noticed...can you see?)

