



Finding Patterns Challenge

I can identify multiplication patterns.



1. On a blank 100 square colour the multiples of 4 up to 12×4 .

Can you spot a pattern?

Can you use the pattern to help you colour all of the multiples of 4 up to 100?

2. On the same 100 square circle the multiples of 8 up to 12×8 .

Can you spot a pattern?

Can you use the pattern to help you circle all of the multiples of 8 up to 100?

3. Now look at both patterns.

What do you notice?

Complete these sentences:

The 8x table facts are _____ the 4x table facts.

4. Does this work for multiples of **5** and **10** too? Use another blank 100 square to investigate it.

Some words to help you:

double

half

odd

even

multiple



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I can identify multiplication patterns.



1. On a blank 100 square colour the multiples of 2 up to 12×2 .

Can you spot a pattern?

Can you use the pattern to help you colour all of the multiples of 2 up to 100?

2. On the same 100 square circle the multiples of 4 up to 12×4 .

Can you spot a pattern?

Can you use the pattern to help you circle all of the multiples of 4 up to 100?

3. On the same 100 square underline the multiples of 8 up to 12×8 .

Can you spot a pattern?

Can you use the pattern to help you underline all of the multiples of 8 up to 100?

Now look at all 3 patterns.

What do you notice?

Complete these sentences:

The **2x** table facts are _____ the 4x table facts.

The **8x** table facts are _____ the 4x table facts.

The **4x** table facts are _____ the 2x table facts.

Write some more sentences of your own to explain what you found out.

4. Does this work for multiples of **3** and **6** too? Use another blank 100 square to investigate it.



Finding Patterns Challenge

I can identify multiplication patterns.



1. If you double the multiples of 4 do you get the multiples of 8?

Use a blank 100 square to investigate your theory up to 100.

2. What happens if you add multiples together?

$2 + 3 = 5$ so...

If you add 2×2 and 2×3 , do you get 2×5 ?

What about 6×2 and 6×3 , do you get 6×5 ?

Does it work with $4 + 3 = 7$? Do the 4s plus the 3s give you the 7 x tables?

Try these out and find lots of examples of your own.

You will be sharing your ideas with the class at the end of the lesson.

Finding Patterns

Challenge Answers

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

Answers will vary, use the multiplication square above to assist with checking examples.

Where the numbers are doubles (e.g. 2 and 4, 3 and 6, 4 and 8) then the multiplication facts are doubled (e.g. $3 \times 4 = 12$ so $3 \times 8 = 24$).

By adding tables together you generate a new set of multiplication facts. The new set of facts is the total of the original multiplication tables you used e.g. $2 + 5 = 7$ so the 2s add the 5s gives you the 7x table.

$4 \times 2 = 8$ add $4 \times 5 = 20$ gives you 28 which is 4×7 .