

The 3, 6 and 9 times-tables

Key learning

- Here is a hundred square.

- ▶ Circle the multiples of 3 in one colour.
- ▶ Circle the multiples of 6 in another colour.
- ▶ Circle the multiples of 9 in a third colour.

What do you notice?

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

- Here are three number tracks for the 3, 6 and 9 times-tables.

Complete the number tracks.

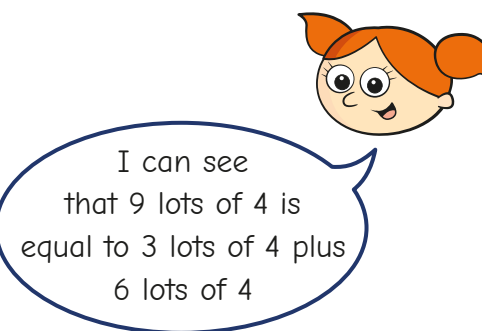
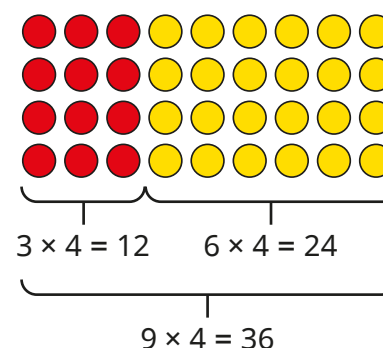
3	6		12					27		33	
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6	12	18				42				66	
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9		27	36					81			
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What do you notice?

- Alex has made an array to show 9×4



Draw and label an array to show that $9 \times 7 = 3 \times 7 + 6 \times 7$

- What does the bar model show about the connection between the 3 times-table and the 9 times-table?

3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

- Tom has 9 bags of 8 pears.

Write a multiplication to find the total number of pears.

Write the fact family for this multiplication.

The 3, 6 and 9 times-tables

Reasoning and problem solving

Is the statement always true, sometimes true or never true?

Multiples of 3 are also multiples of 6 and 9

Explain your answer.



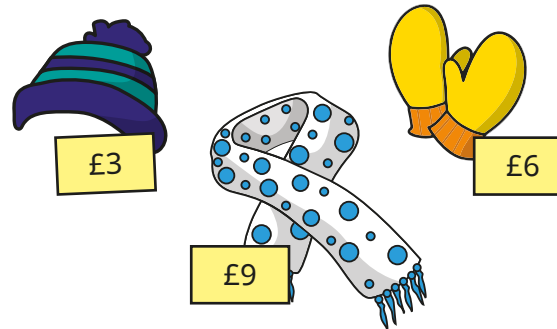
Max is thinking of a 2-digit number.



My number is a multiple of 3, 6 and 9

The tens digit is half the ones digit.

What is Max's number?



Esther buys 4 hats, 2 scarves and 3 pairs of gloves.

How much does Esther spend?

Dani and Huan have £54 between them.

Huan has 5 times as much money as Dani.

Dani spends all her money on 3 books that all cost the same amount.

How much does each book cost?

