

11.1.21

WALT Recall and Use Multiplication Facts for the  
9  $\times$  Table

F

R

PS

# Quick Warm Up

First, count in 6s from 0 to 72? Can you manage without looking at the screen?

0 6 12 18 24 30 36 42 48 54 60 66 72

Can you count in 6s quickly and accurately?

Now, try counting backwards in 6s from 72 to 0. Can you manage without looking at the screen this time?

72 66 60 54 48 42 36 30 24 18 12 6 0

Is this as easy as counting forwards?

# Vocabulary

concrete apparatus

array

pictorial representation

equal

groups of

lots of

times table

total

altogether

number sentence

multiply

multiplication

multiples

odd

even

double

division

inverse

# Concrete Apparatus

Some oranges are stacked in groups of 9. Complete the sentences to describe the oranges.

There are 9 oranges in each row.

There are 4 rows.

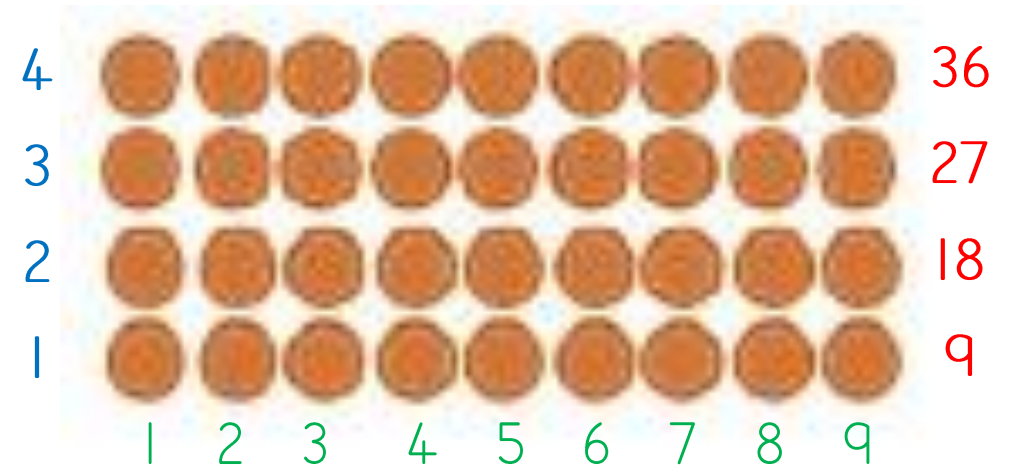
Altogether, there are 36 oranges.

We can write this as a multiplication number sentence.

$$4 \times 9 = 36$$

Or, as a division number sentence.

$$36 \div 9 = 4$$

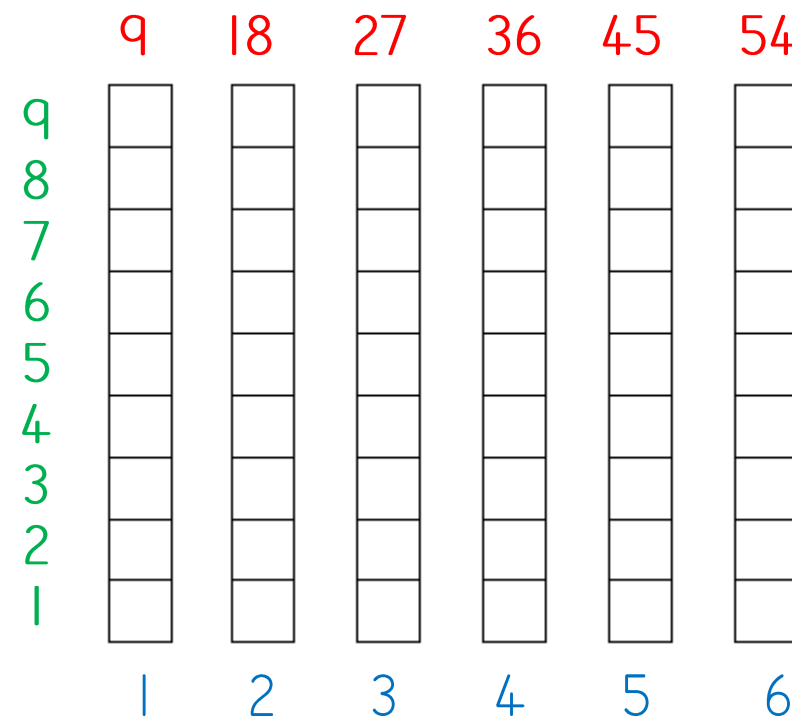


# Fact Families

How many number sentences there are for every fact family? 4

Let's write the number sentences for these towers of cubes.  
First, count the columns, rows and total number of cubes.

$$\begin{array}{rclcl} \underline{6} & \times & \underline{9} & = & \underline{54} \\ \underline{9} & \times & \underline{6} & = & \underline{54} \\ \\ \underline{54} & \div & \underline{6} & = & \underline{9} \\ \underline{54} & \div & \underline{9} & = & \underline{6} \end{array}$$

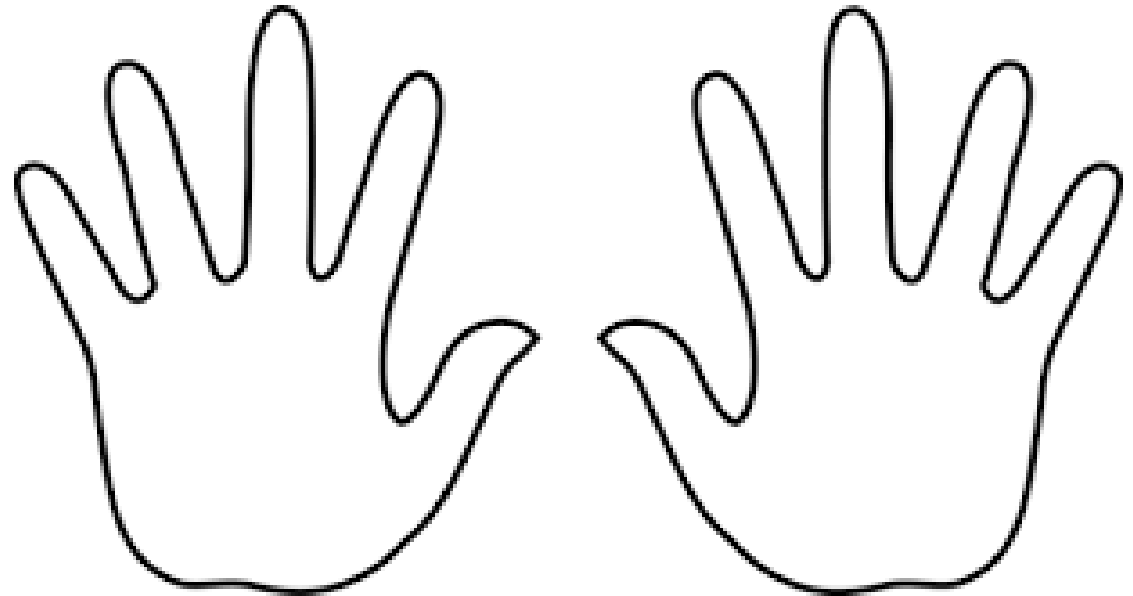


Where is the BIG number in each number sentence?  
It's the **answer** for  **$\times$**  and it goes at the **start** for  **$\div$**

# Spiderman Hands

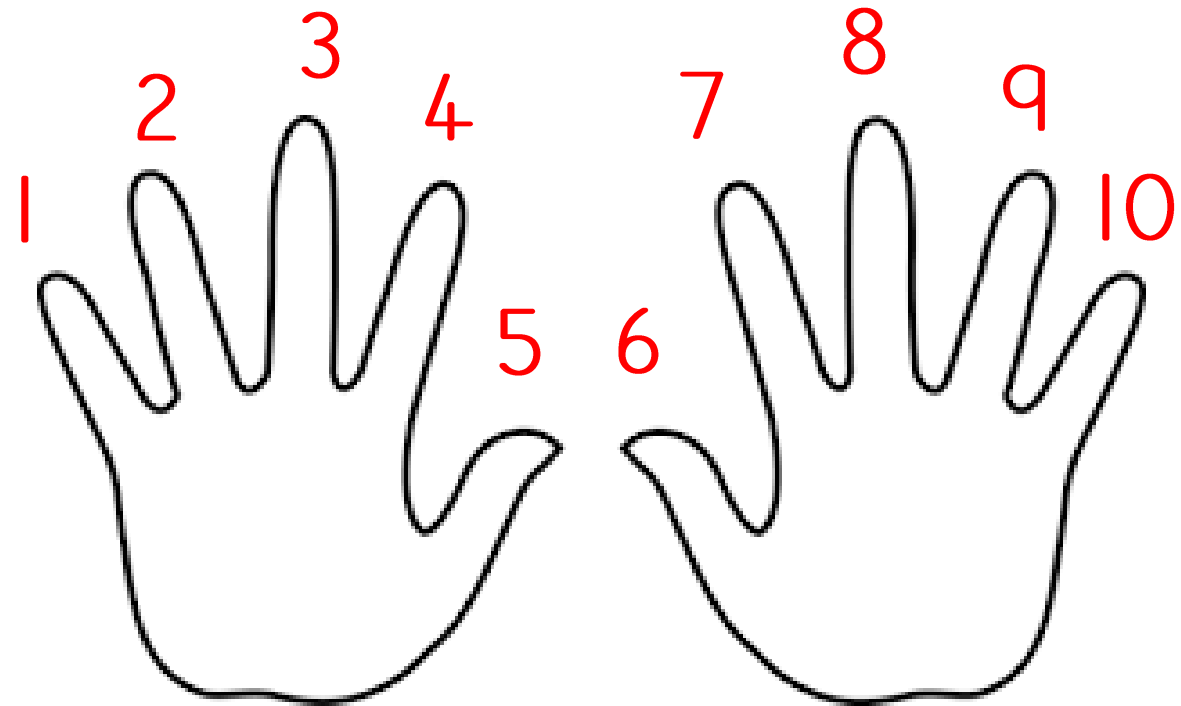
You can use your hands to help you quickly find the answers to 9x table questions.

We call this: Spiderman Hands



# Spiderman Hands

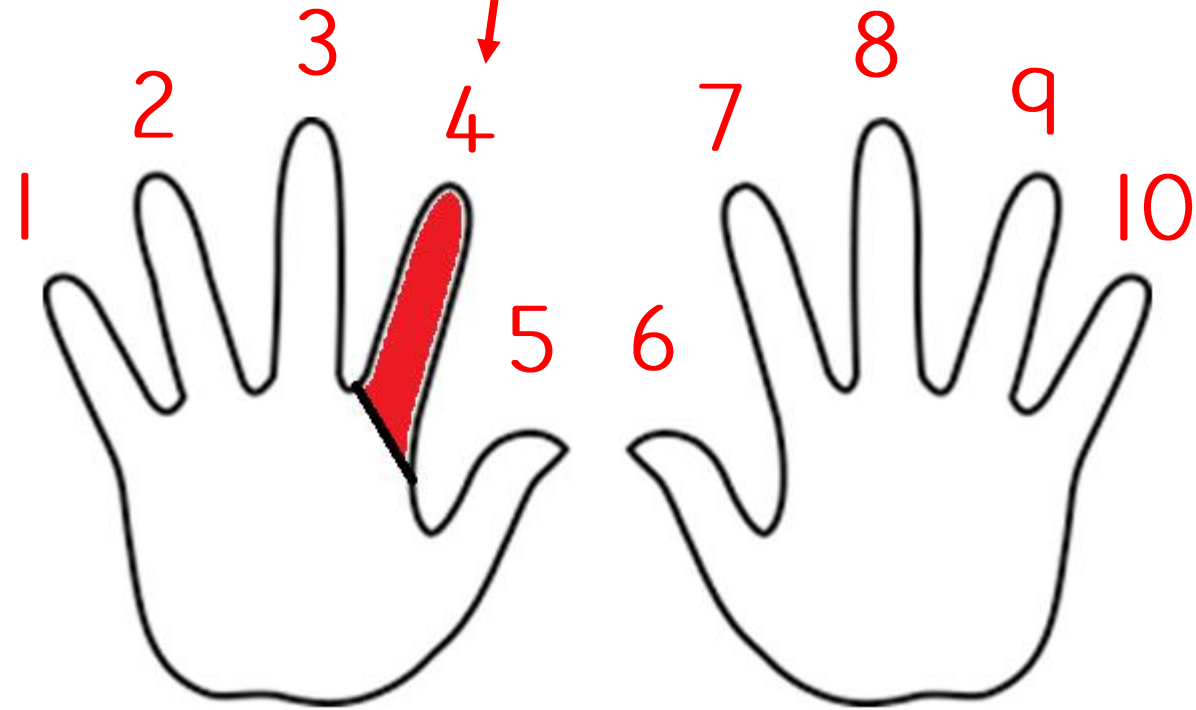
1. Put your hands flat on the table in front of you.
2. Count your fingers and thumbs, starting on the left, from 1 to 10.
3. Look at how many 9s you need to find. We will find  $4 \times 9$ .



# Spiderman Hands

4. To find 4 lots of 9, BEND DOWN finger number 4. On the screen, finger number 4 has been coloured in RED.

Finger 4 is bent down because we are finding  $4 \times 9$ .

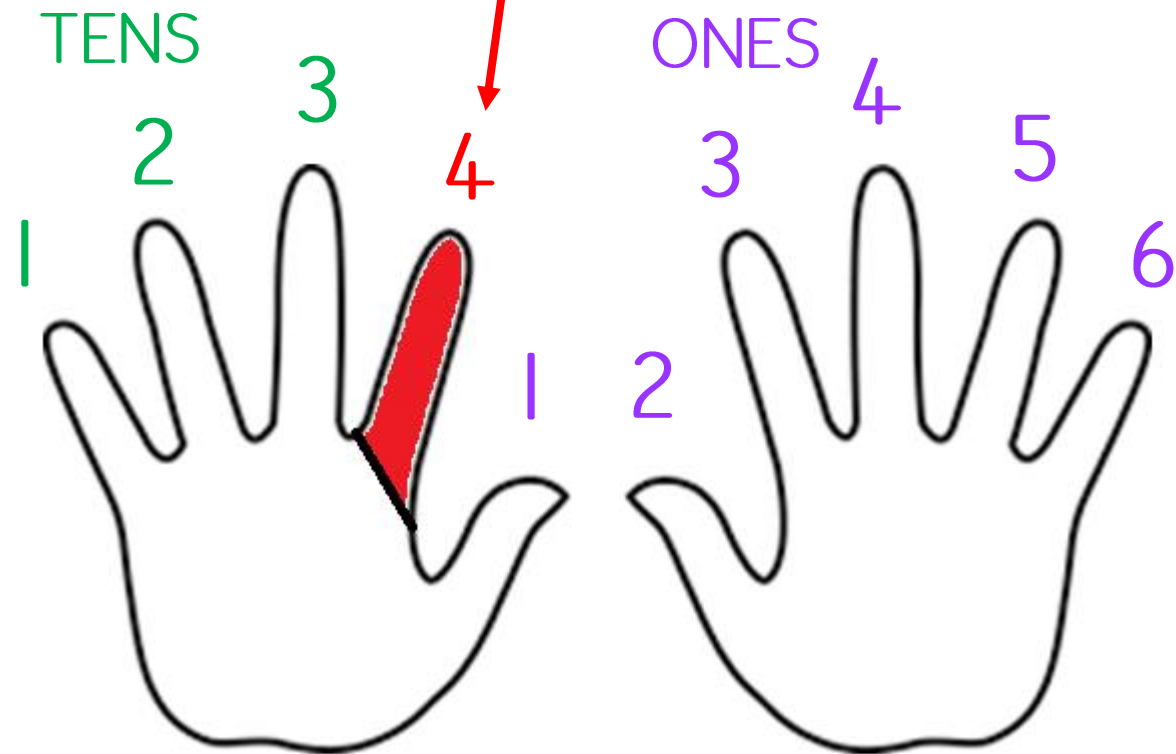


# Spiderman Hands

5. The fingers on the **LEFT** of the finger you have bent down are the **TENS** in the answer. **3 TENS**
6. The fingers on the **RIGHT** of the finger you have bent down are the **ONES** in the answer. **6 ONES**
7. So,  $4 \times 9 = 36$

Finger 4 is bent down because we are finding  $4 \times 9$ .

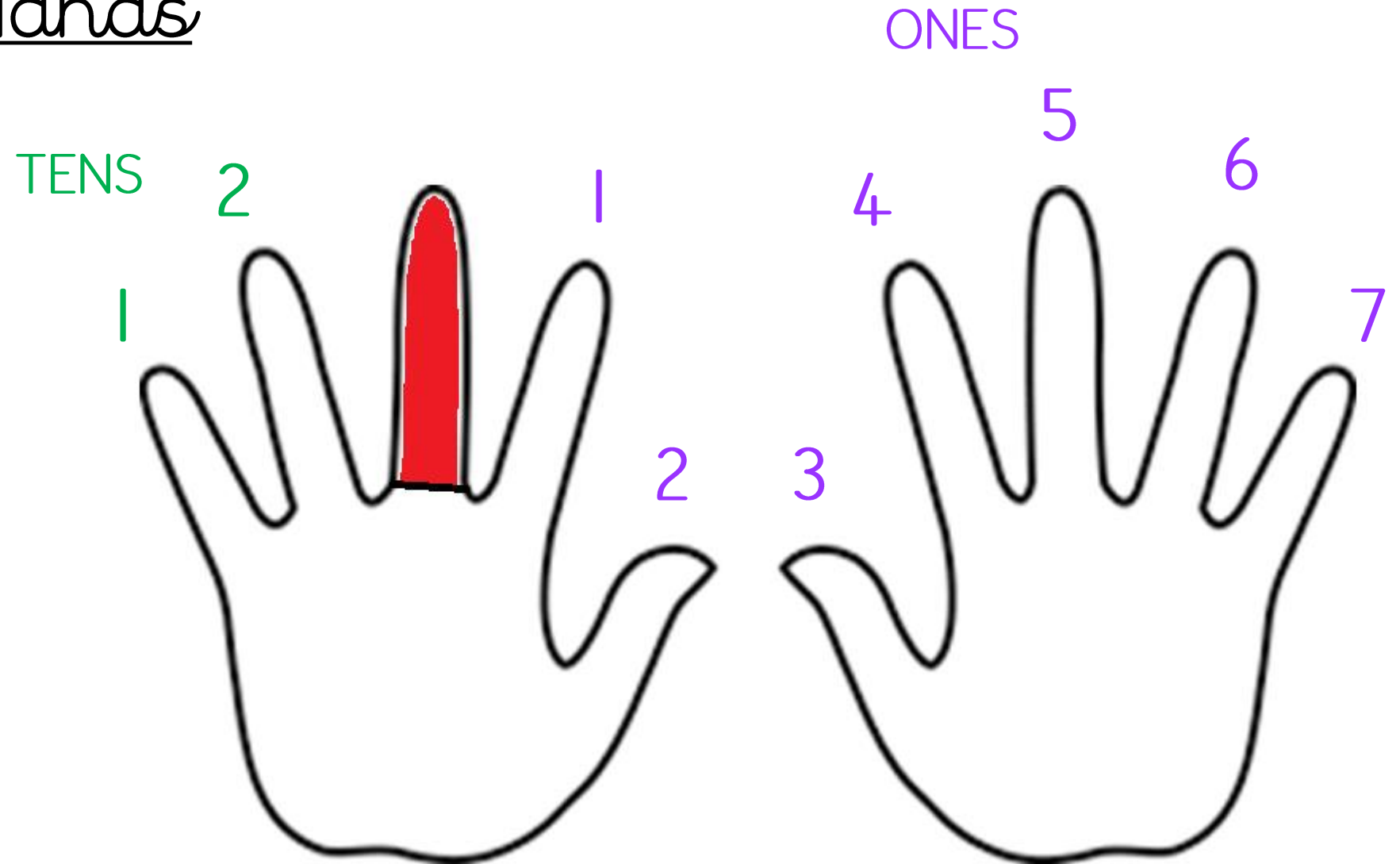
Now, let's find some more answers using Spiderman Hands.



# Spiderman Hands

$$3 \times 9 = 27$$

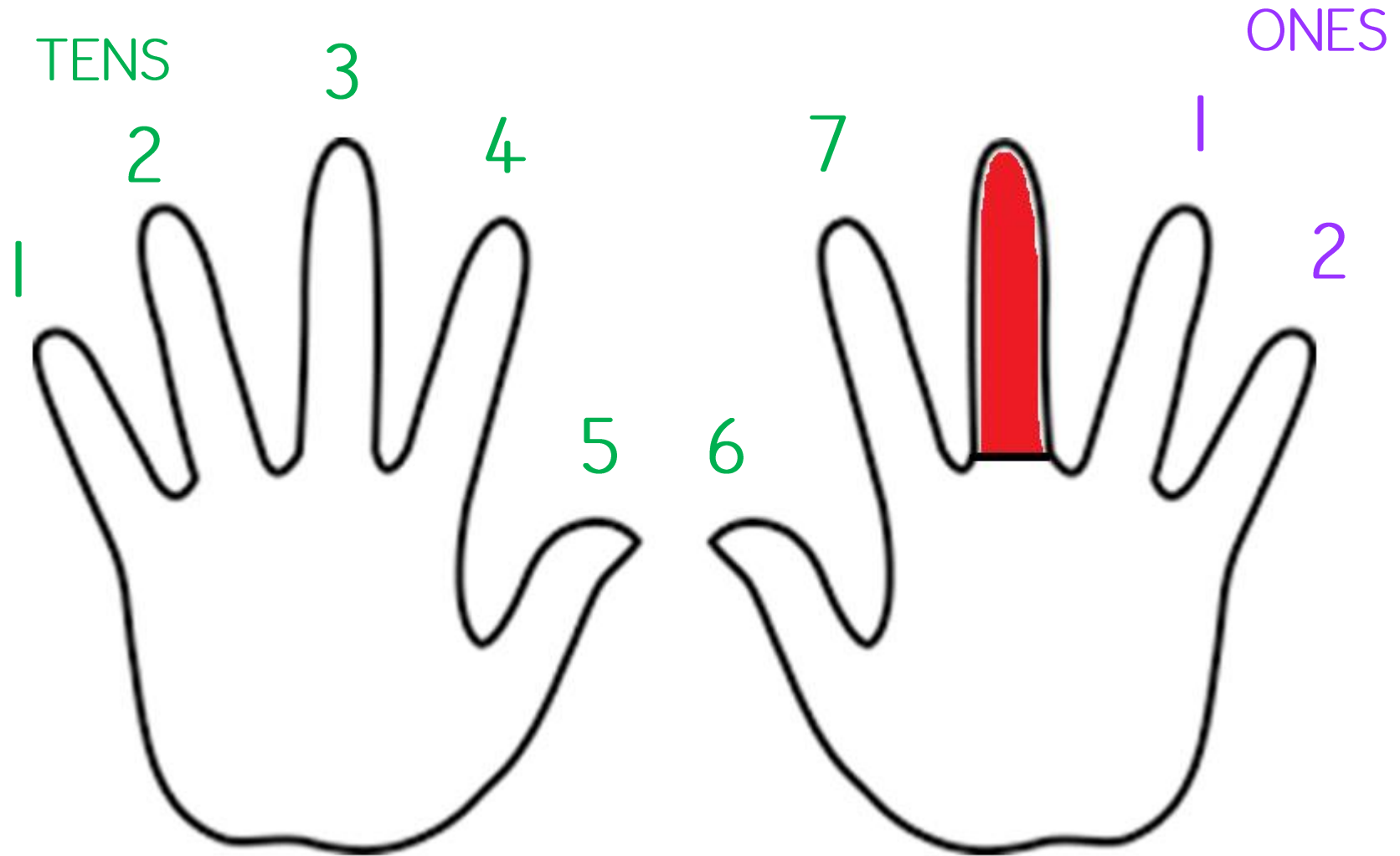
Bend finger  
number 3 down.



# Spiderman Hands

$$8 \times 9 = 72$$

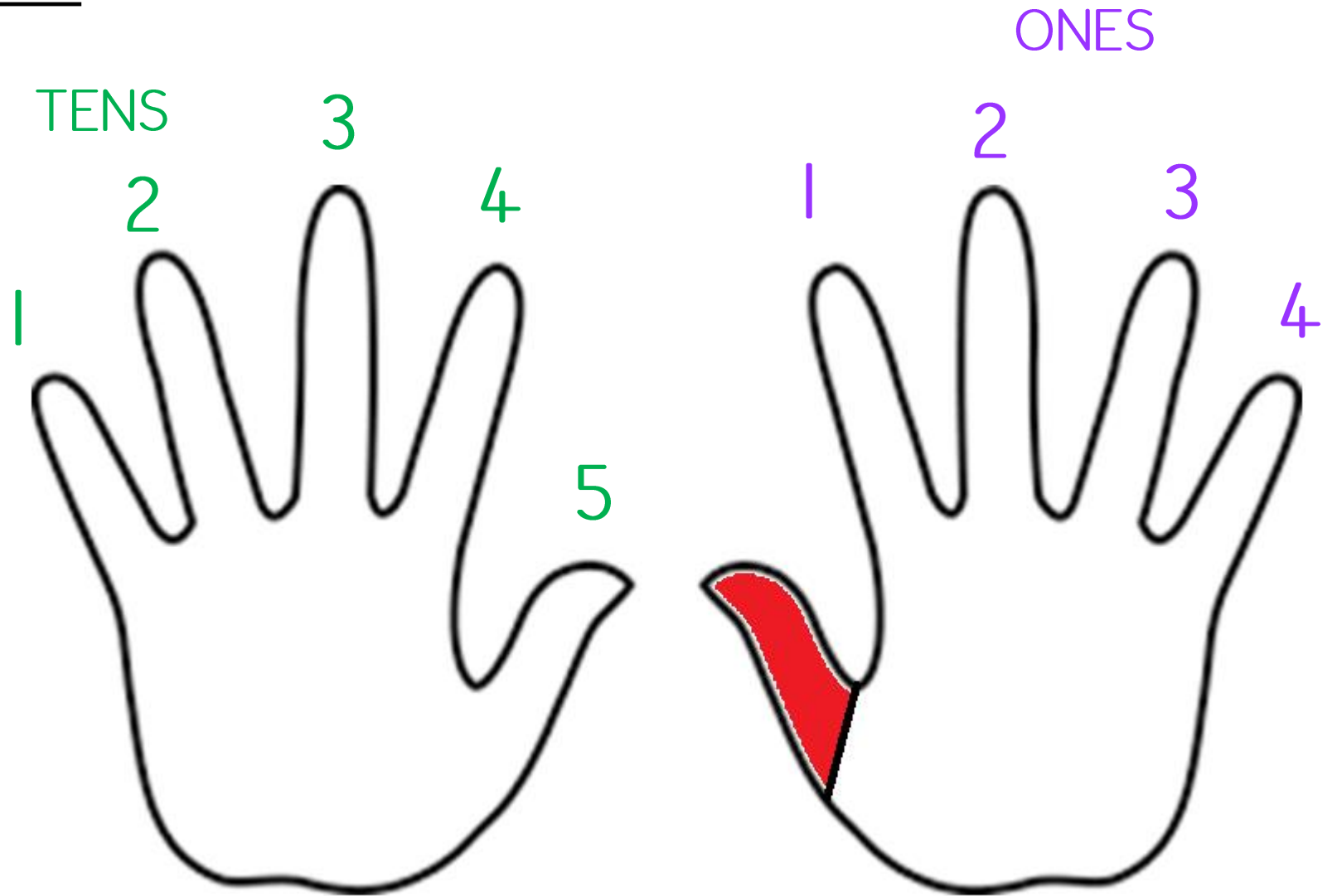
Bend finger  
number 8 down.



# Spiderman Hands

$$9 \times 6 = 54$$

Bend finger  
number 6 down.



## Fluency 1

1. Complete the number track by counting in 9s.

0	9											
---	---	--	--	--	--	--	--	--	--	--	--	--

2. Draw the correct line through each 'counting in 9s' number maze.

0	9	18	28	105	108	65	53	44	53
26	17	27	35	98	99	54	45	35	26
44	45	36	81	90	90	63	36	27	19
61	54	63	72	99	81	72	26	18	9
70	65	71	80	108	91	79	35	28	0

3. Write the next number for each 'counting in 9s' sequence.

18, 27, \_\_\_\_\_

72, 81, \_\_\_\_\_

36, 45, \_\_\_\_\_

45, 54, \_\_\_\_\_

81, 90, \_\_\_\_\_

0, 9, \_\_\_\_\_

45, 54, \_\_\_\_\_

81, 90, \_\_\_\_\_

72, 81, \_\_\_\_\_

90, 99, \_\_\_\_\_

If you are already confident with your 9x table, you don't need to do these questions.

### Fluency | Extra Practice

Use the Spiderman hands to help you work out the answers to the 9 x table questions.

1.  $3 \times 9 =$



2.  $6 \times 9 =$



3.  $8 \times 9 =$



4.  $9 \times 2 =$



5.  $4 \times 9 =$



6.  $9 \times 7 =$



7.  $5 \times 9 =$



8.  $9 \times 9 =$



Fluency 2

1		5	×	9	-			16		9	×	0	-	
2		9	×	9	-			17		9	×	6	-	
3		4	×	9	-			18		2	×	9	-	
4		10	×	9	-			19		9	×	11	-	
5		9	×	12	-			20		6	×	9	-	
6		9	×	5	-			21		9	×	3	-	
7		1	×	9	-			22		9	×	9	-	
8		9	×	8	-			23		3	×	9	-	
9		9	×	2	-			24		7	×	9	-	
10		7	×	9	-			25		11	×	9	-	
11		11	×	9	-			26		9	×	7	-	
12		9	×	10	-			27		0	×	9	-	
13		12	×	9	-			28		9	×	4	-	
14		9	×	9	-			29		8	×	9	-	
15		4	×	9	-			30		9	×	1	-	

## Reasoning

Gary is thinking about his times tables.



I know that the answers in the  $6\times$  table are **DOUBLE** the answers in the  $3\times$  table.

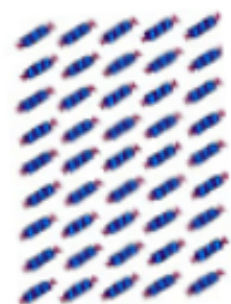
I think that the answers in the  $9\times$  table are **FOUR** times as big as the answers in the  $3\times$  table.

Is Gary correct?

Explain your reasoning using mathematical vocabulary. Starting with  $1 \times 3$  and  $1 \times 9$ , write down the first four answers from the  $3\times$  and  $9\times$  tables to help you with your explanation.

## Problem Solving

Chris and Ella both have some sweets.



I have more sweets  
because I have more  
rows than Ella.



I have more sweets than  
Chris because I have  
more in each row.

Who has more sweets?

Write a number sentence for each child and explain your reasoning using mathematical vocabulary.

## Extra Practice

If you finish your work quickly or if you want to do some more practice of your times tables, you could use 'Hit the Button'.

<https://www.topmarks.co.uk/maths-games/hit-the-button>

Also, practise counting in 6s forwards (from 0 to 72) and backwards (from 72 to 0).  
Practise counting in 9s too (from 0 to 108). Can you count backwards from 108 in 9s?



# Answers

## Fluency 1

1. Complete the number track by counting in 9s.

0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108

2. Draw the correct line through each 'counting in 9s' number maze.

0	9	18	28	105
26	17	27	35	98
44	45	36	81	90
61	54	63	72	99
70	65	71	80	108

108	65	53	44	53
99	54	45	35	26
90	63	36	27	19
81	72	26	18	9
91	79	35	28	0

## Fluency 1

3. Write the next number for each 'counting in 9s' sequence.

18, 27, 36

72, 81, 90

36, 45, 54

45, 54, 63

81, 90, 99

0, 9, 18

45, 54, 63

81, 90, 99

72, 81, 90

90, 99, 108

## Fluency | Extra Practice

Use the Spiderman hands to help you work out the answers to the 9  $\times$  table questions.

1.  $3 \times 9 = 27$



5.  $4 \times 9 = 36$



2.  $6 \times 9 = 54$



6.  $9 \times 7 = 63$



3.  $8 \times 9 = 72$



7.  $5 \times 9 = 45$



4.  $9 \times 2 = 18$



8.  $9 \times 9 = 81$



Fluency 2

1		5	×	9	-	45		16		9	×	0	-	0
2		9	×	9	-	81		17		9	×	6	-	54
3		4	×	9	-	36		18		2	×	9	-	18
4		10	×	9	-	90		19		9	×	11	-	99
5		9	×	12	-	108		20		6	×	9	-	54
6		9	×	5	-	45		21		9	×	3	-	27
7		1	×	9	-	9		22		9	×	9	-	81
8		9	×	8	-	72		23		3	×	9	-	27
9		9	×	2	-	18		24		7	×	9	-	63
10		7	×	9	-	63		25		11	×	9	-	99
11		11	×	9	-	99		26		9	×	7	-	63
12		9	×	10	-	90		27		0	×	9	-	0
13		12	×	9	-	108		28		9	×	4	-	36
14		9	×	9	-	81		29		8	×	9	-	72
15		4	×	9	-	36		30		9	×	1	-	9

## Reasoning

3	$\times 3 =$	9
6	$\times 3 =$	18
9	$\times 3 =$	27
12	$\times 3 =$	36

Gary is not correct.

If you times the answers to the 3x table (multiples of 3) by FOUR, you get the answers to the 12x table (multiples of 12) because  $3 \times 4 = 12$

To get the answers to the 9x table (multiples of 9), you need to times the 3x table answers by 3 because  $3 \times 3 = 9$

## Problem Solving

The children both have the same number of sweets.

Chris has  $9 \times 5 = 45$  sweets

5 10 15 20 25 30 35 40 45

Ella has  $5 \times 9 = 45$  sweets

9 18 27 36 45

When you multiply numbers, you can change the order of the numbers you are multiplying and you will still get the same answer.