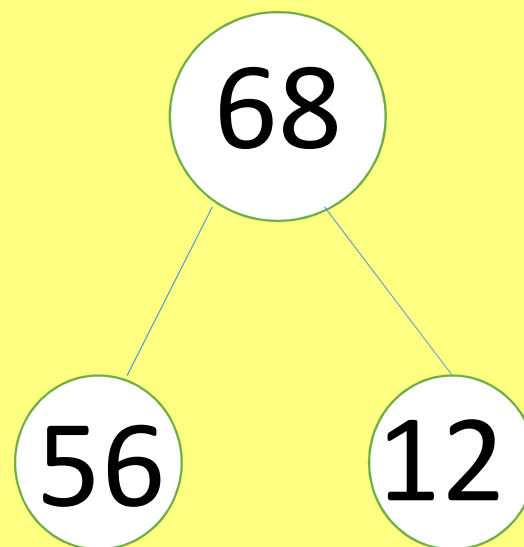


Maths Workshop for Parents

November 2023

Addition

$$56 + 12 =$$



Use known number facts

Part part whole



Children explore ways of making numbers within 20

$$\begin{array}{l} \square + \square = 20 \\ \square + \square = 20 \end{array} \quad \begin{array}{l} 20 - \square = \square \\ 20 - \square = \square \end{array}$$

$$\begin{array}{l} \square + 1 = 16 \\ 1 + \square = 16 \end{array}$$

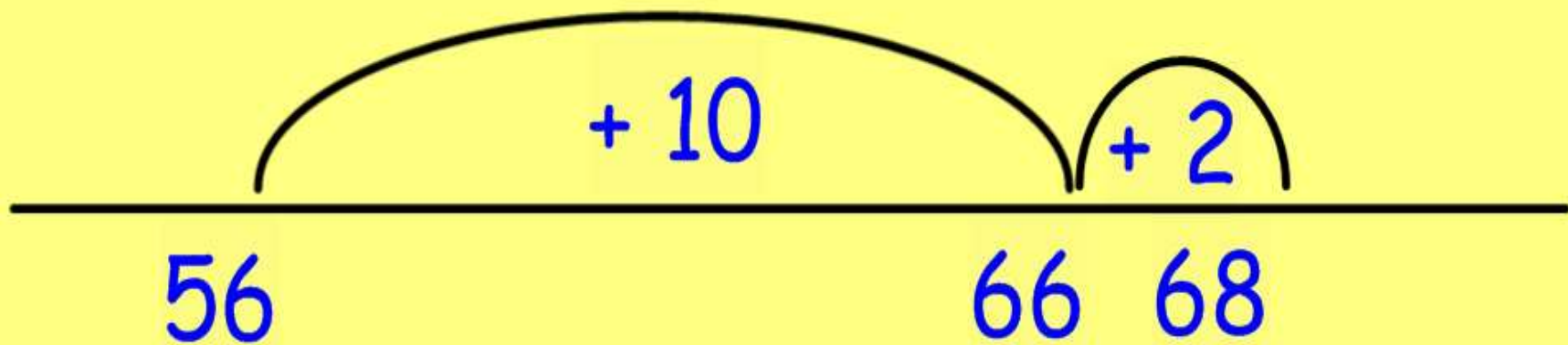
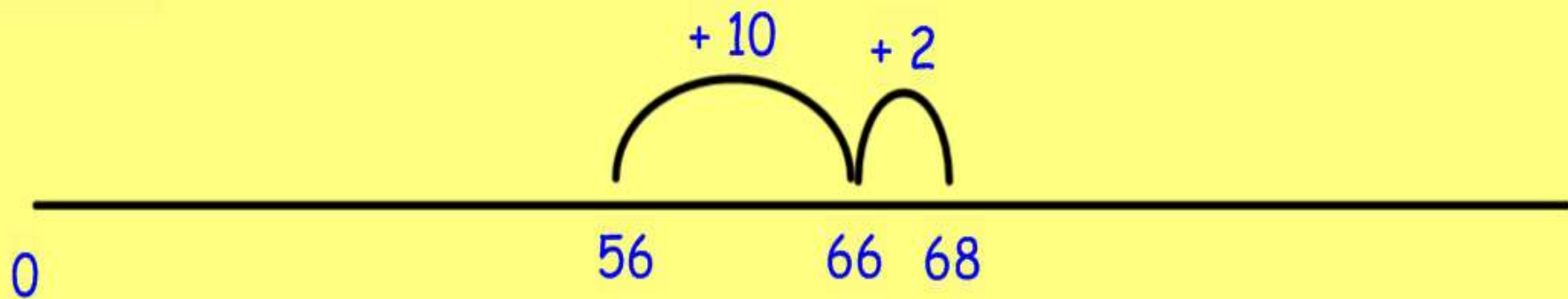
$$\begin{array}{l} 16 - 1 = \square \\ 16 - \square = 1 \end{array}$$

Addition

$$56 + 12 =$$

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

$$56 + 12 =$$



$$16 + 16 =$$

Have a go!

$$167 + 34 =$$

Something more familiar?

$$\begin{array}{r} 368 \\ +493 \\ \hline \end{array}$$

$$\begin{array}{r} 368 \\ +493 \\ \hline \end{array}$$

1 1

1 5 0













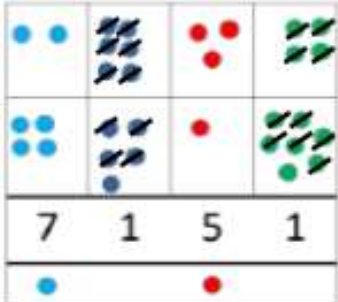
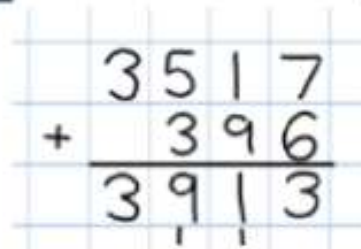






$$\begin{array}{r} 700 \\ \hline \end{array}$$

8 6 1

← ones

← tens

← hundreds

Objective & Strategy	Concrete	Pictorial	Abstract									
Y4—add numbers with up to 4 digits	<p>Children continue to use dienes or pv counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand.</p> <table><tr><th>Hundreds</th><th>Tens</th><th>Ones</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Hundreds	Tens	Ones							 <p>Draw representations using pv grid.</p>	 <p>Continue from previous work to carry hundreds as well as tens. Relate to money and measures.</p>
Hundreds	Tens	Ones										
												
												

Y4-6

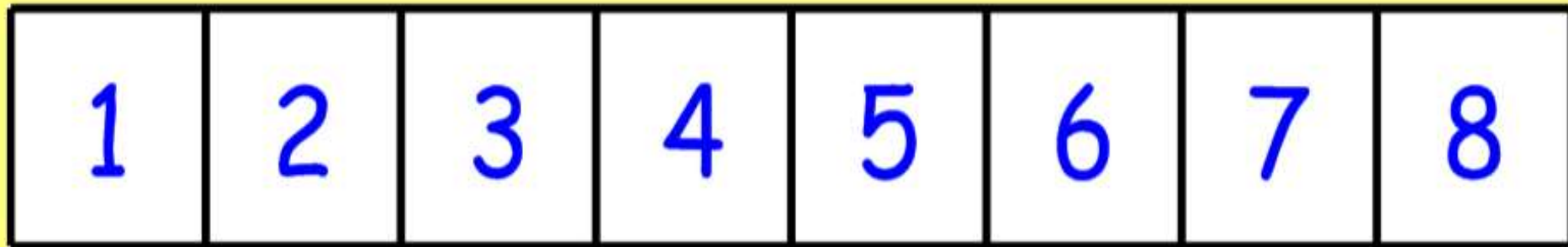
AD

Y4-6

AD

Subtraction (Take away)

$$8 - 4 =$$



Subtraction (finding the difference)

$$35 - 12 =$$

Subtraction (finding the difference)
Using a number line

$$35 - 12 =$$



Always check subtraction by using the inverse operation.

$$35 - 12 = 23$$

$$23 + 12 = 35$$

$$45 - 34 =$$

Have a go!

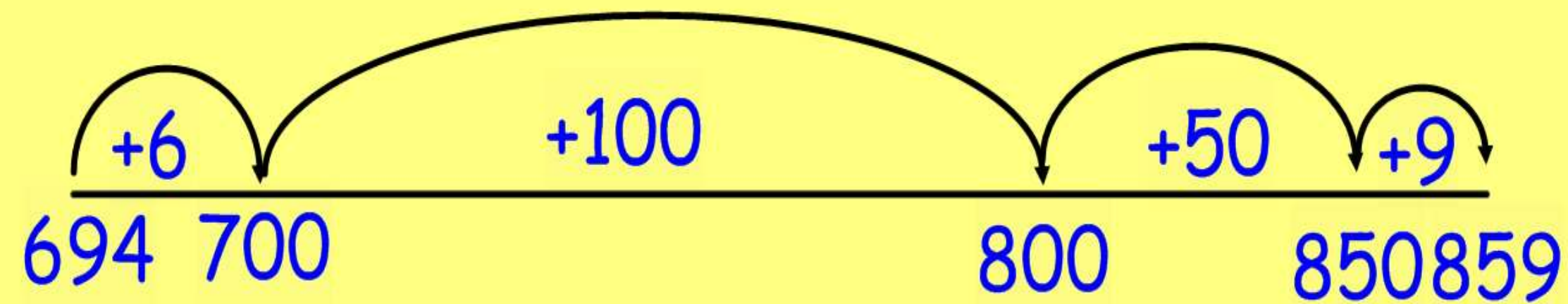
$$126 - 75 =$$

Number sentences are less useful as partitioning generally cannot be used.

In the example $73 - 26 =$ it is possible to start with $70 - 20$ but $3 - 6$ is less useful!

Numberlines make the calculation easier.

$$\begin{array}{r} 859 \\ -694 \\ \hline \end{array}$$



Using addition for subtraction

859

-694

6

700

100

800

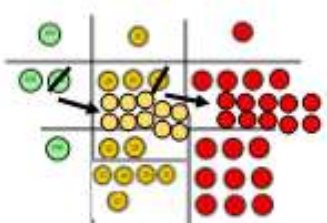
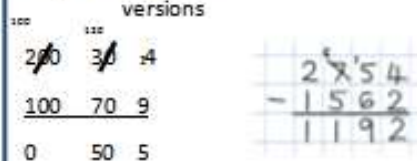
50

850

9

859

165

Objective & Strategy	Concrete	Pictorial	Abstract												
<p>Subtracting tens and ones</p> <p>Year 4 subtract with up to 4 digits.</p> <p><i>Introduce decimal subtraction through context of money</i></p>	<p>234 - 179</p>  <p>Model process of exchange using Numicon, base ten and then move to PV counters.</p>	<p>Children to draw place value counters to show their exchange.</p>	<p>Begin with expanded versions</p> <table border="0"> <tr> <td>¹⁰⁰200</td> <td>¹⁰30</td> <td>4</td> <td></td> </tr> <tr> <td>¹⁰⁰100</td> <td>¹⁰70</td> <td>9</td> <td></td> </tr> <tr> <td>0</td> <td>50</td> <td>5</td> <td></td> </tr> </table>  <p>Use language of 'exchange' rather than borrow.</p>	¹⁰⁰ 200	¹⁰ 30	4		¹⁰⁰ 100	¹⁰ 70	9		0	50	5	
¹⁰⁰ 200	¹⁰ 30	4													
¹⁰⁰ 100	¹⁰ 70	9													
0	50	5													

Y4-6

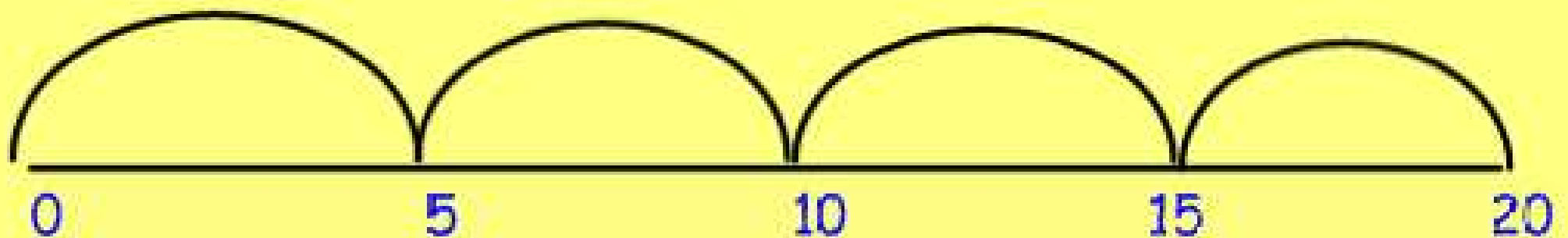
SUBTR

Multiplication

$$4 \times 5 =$$

4 lots of 5

00000 00000 00000 00000



$$4 \times 16 =$$

x	10	6
4	.	.

$$4 \times 16 =$$

×	10	6
4	40	24

$$24 \times 31 =$$

×	20	4
30	600	120
1	20	4

$$5 \times 18 =$$

$$43 \times 29 =$$

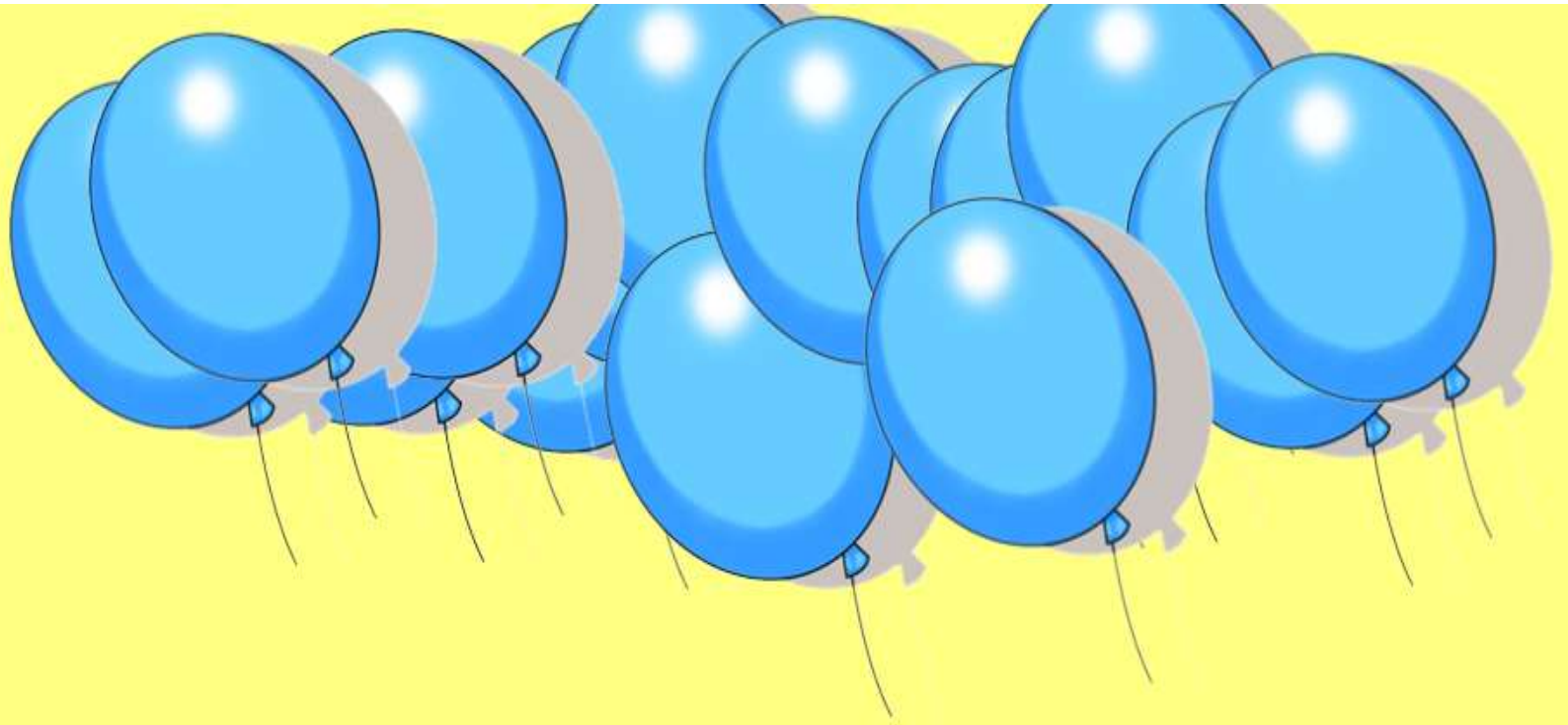
This can be extended to larger numbers and decimals.

$$53.5 \times 17 =$$

\times	50	3	0.5
10	500	30	5
7	350	21	3.5
= 850		=51	=8.5

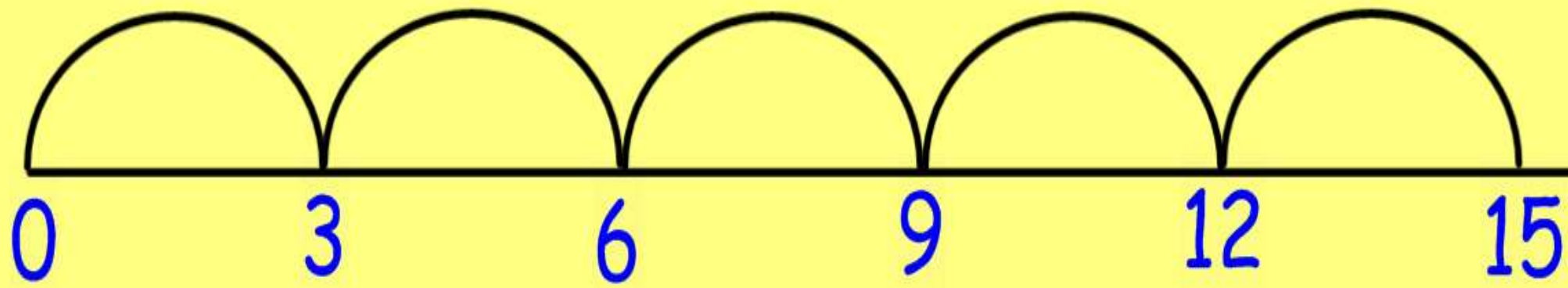
Division

$$15 \div 3 =$$



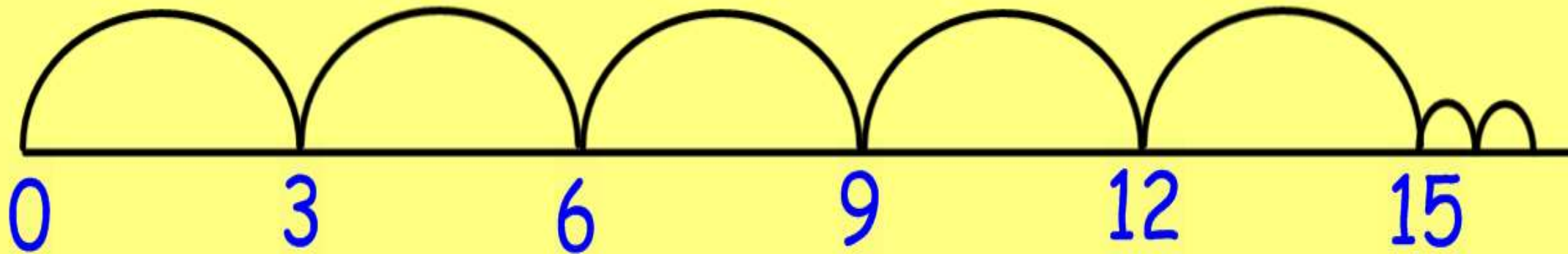
Use the inverse operation to check your answer.

$$15 \div 3 =$$



Division with remainders

$$17 \div 3 =$$



$$65 \div 5 =$$

$$110 \div 11 =$$

Chunking Method for Division

$$\begin{array}{r} 147 \\ \div 5 \\ \hline \end{array}$$

$$= 29^r 2$$

$$50 = 10 \times 5$$

$$\begin{array}{r} 97 \\ \hline \end{array}$$

$$50 = 10 \times 5$$

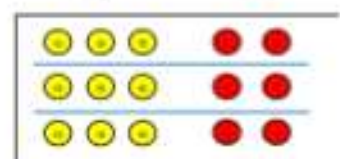


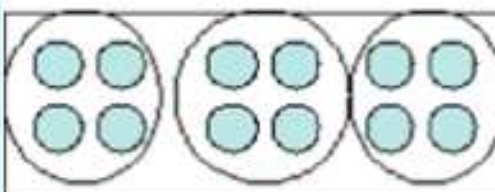


$$\begin{array}{r} 47 \\ \hline \end{array}$$

$$45 = 9 \times 5$$

$$2$$

Y4-6

DIM

Objective & Strategy	Concrete	Pictorial	Abstract				
Divide at least 3 digit numbers by 1 digit. Short Division	<p>$96 \div 3$</p> <table><thead><tr><th>Tens</th><th>Units</th></tr></thead><tbody><tr><td>3</td><td>2</td></tr></tbody></table>  <p>Use place value counters to divide using the bus stop method alongside</p>   <p>Calculators $42 \div 3$</p>	Tens	Units	3	2	<p>Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.</p> 	<p>Begin with divisions that divide equally with no remainder.</p>  <p>Children can write out multiple lists to support</p> <p>Move onto divisions with a remainder.</p> 
Tens	Units						
3	2						

Hit the Button



**Square
Numbers**

**Division
Facts**

Halves

**Times
Tables**

Doubles

**Number
Bonds**

Learning Zone

Today



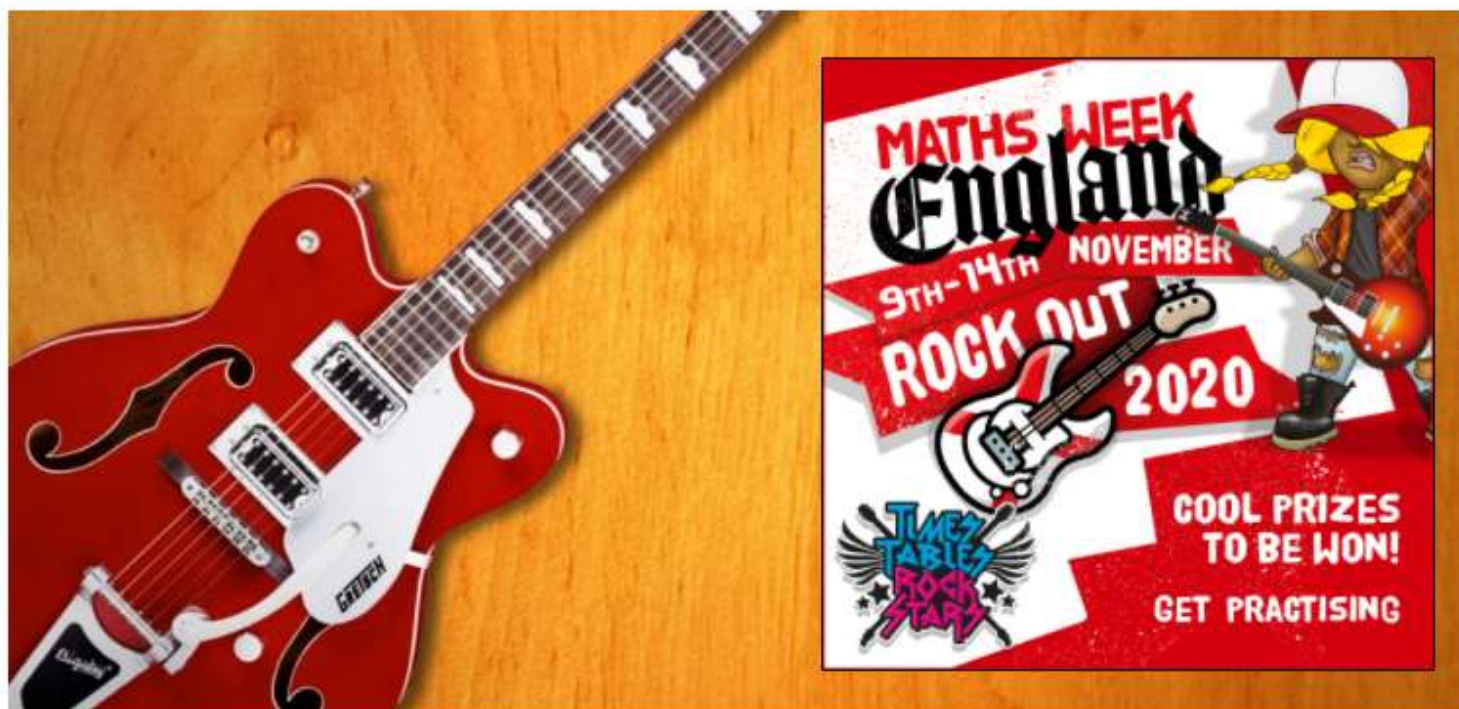
Hard work really does pay off, Eleanor. You've reached the green zone. Keep it up!



 Add Assignment



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What is Times Tables Rock Stars?

