

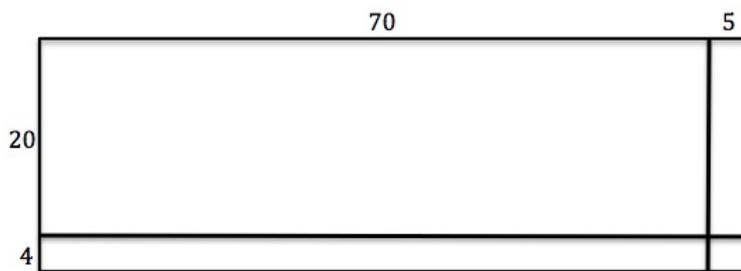


**TWO BY TWO PUZZLE**

<b>×</b>	<b>20</b>	<b>4</b>	
<b>70</b>	<b>1400</b>	<b>?</b>	<b>1680</b>
<b>5</b>	<b>?</b>	<b>20</b>	<b>120</b>
	<b>1500</b>	<b>?</b>	<b>1800</b>

Find numbers to replace the ? marks to solve this two by two multiplication puzzle.

Can you explain how it works?



How does this diagram connect with the multiplication?

Use the two grids BELOW to do the two multiplications in a similar way:

$72 \times 25$

$50 \times 36$

What do you notice? Why is this happening?

<b>×</b>			

<b>×</b>			

## HELP

SPOT THE MISTAKE										
How do these methods work? Find the mistake and put it right.										
$\begin{array}{r} 29 \\ \times 51 \\ \hline 145 \\ 290 \\ \hline 435 \end{array}$	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">×</td> <td style="text-align: center;">20</td> <td style="text-align: center;">9</td> </tr> <tr> <td style="text-align: center;">50</td> <td style="text-align: center;">1000</td> <td style="text-align: center;">450</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">20</td> <td style="text-align: center;">9</td> </tr> </table> <p> <math>29 \times 51</math>  <math>= 1000 + 450 + 20 + 9</math>  <math>= 1479</math> </p>	×	20	9	50	1000	450	1	20	9
×	20	9								
50	1000	450								
1	20	9								
$29 \times 51$ $= 30 \times 51 - 51$ $= 1530 - 51$ $= 1479$	$29 \times 51$ $= 29 \times 50 + 29$ $= 145 \times 100 + 29$ $= 1450 + 29$ $= 1479$									

Work with a partner to check all the calculations in these boxes and to correct the mistakes. Remember that you need to think about place value, that is about tens and units.

This will show you how the calculation in the puzzle on page 1 works.

SPOT THE MISTAKE									
How do these methods work? Find the mistake and put it right.									
$\begin{array}{r} 79 \\ \times 8 \\ \hline 642 \end{array}$	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">×</td> <td style="text-align: center;">70</td> <td style="text-align: center;">9</td> <td style="text-align: center;">TOTAL</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">560</td> <td style="text-align: center;">72</td> <td style="text-align: center;">632</td> </tr> </table> <p> <math>632 \div 8 =</math>  <math>\boxed{80 \times 7 + 8 \times 9} \div 8 = 79</math> </p>	×	70	9	TOTAL	8	560	72	632
×	70	9	TOTAL						
8	560	72	632						
$8 \overline{) 6372}$ $\underline{79}$									

SPOT THE MISTAKE <https://aiminghigh.aimssec.ac.za/years-4-7-spot-the-mistake/>

## NEXT

Make up a similar multiplication task of your own using different numbers.