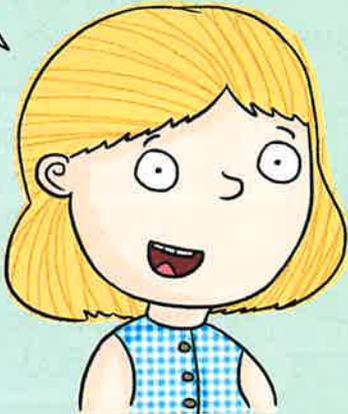




Challenge

I know that $4 \times 8 = 32$. I can use this fact to help me work out the answers to these facts.



Explain how Kate might work out each answer.

$$40 \times 8 = \square$$

$$41 \times 8 = \square$$

$$32 \div \square = 8$$

$$4 \times 16 = \square$$

$$64 \div 4 = \square$$

$$80 \times 4 = \square$$

$$320 \div 8 = \square$$

Think about ...



Think about the relationship between multiplication and division, and what happens when you multiply a number by 10.



Write the answer to each calculation and show all your working.

What if?

Alexander says:

I know that $3 \times 6 = 18$

What other multiplication and division calculations might Alexander be able to work out?

Show how Alexander might work out each answer.

When you've finished, turn to page 80.





When you've finished, turn to page 80.

Explain how you worked out the missing digits.

$\begin{array}{r} \\ 252 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} \\ 392 \\ \times \\ \hline 9 \end{array}$	$\begin{array}{r} 195 \\ \times \\ \hline 6 \end{array}$
--	---	---

What digits are missing from the grey boxes in these calculations?

What if?

How might the inverse relationships of multiplication and addition help you work out the missing numbers and digits?



Think about making estimates and using 'trial and improvement'.

Think about ...

Explain how you worked out the missing numbers.

$\begin{array}{r} \\ 448 \\ + 48 \\ \hline \end{array}$	$\begin{array}{r} \\ 240 \\ + 28 \\ \hline \end{array}$												
<table border="1" style="border-collapse: collapse; width: 100px; height: 40px;"> <tr> <td style="width: 33%; text-align: center;">8</td> <td style="width: 33%; text-align: center;">50</td> <td style="width: 33%; text-align: center;">48</td> </tr> <tr> <td style="text-align: center;">×</td> <td style="text-align: center;">50</td> <td style="text-align: center;">48</td> </tr> </table>	8	50	48	×	50	48	<table border="1" style="border-collapse: collapse; width: 100px; height: 40px;"> <tr> <td style="width: 33%; text-align: center;">4</td> <td style="width: 33%; text-align: center;">240</td> <td style="width: 33%; text-align: center;">28</td> </tr> <tr> <td style="text-align: center;">×</td> <td style="text-align: center;">240</td> <td style="text-align: center;">28</td> </tr> </table>	4	240	28	×	240	28
8	50	48											
×	50	48											
4	240	28											
×	240	28											

What numbers are missing from the grey spaces in these calculations?

Challenge



Missing numbers and digits

Multiplication and division

Reasoning mathematically