Mammoth multiplications

Focus of activity: Using known times tables and place value to multiply, e.g. 4 x 3, 4 x 30, 4 x 300.

Working together: conceptual understanding

- *Today we are going to use our times tables and skills in multiplying by 10 and 100 to work out some huge multiplications!*
- Sketch a 1000s, 100s, 10s and 1s place value grid. Write 4 x 3 at the side. Ask a child to write the answer in the place value grid.
- Write 4 x 30. Say that the answer to this multiplication is 10 times as big as the answer to 4 x 3. *How do we multiply by 10?* (Digits move one place to the left.) Write the answer in the place value grid.
- Write 4 x 300. Ask children how we can work out the answer. Discuss that that answer is 10 times as big to the answer to 4 x 30, 100 times as big to the answer to 4 x 3. *Four times three hundred is twelve hundred, which is another way of saying one thousand, two hundred.* Write the answer in the place value grid.
- Point out how the digits have moved to the left each time, and 0s have been written to show that there are no 1s or 10s.

	1000s	100s	10s	1s
4 x 3			**1**	**2**
4 x 30		**1**	**2**	**0**
4 x 300	**1**	**2**	**0**	**0**

- Repeat for 6 x 5, 6 x 50 and 6 x 500.
- Write 7 x 2, 7 x 20 and 7 x 200. Ask children to work in pairs to sketch their own 1000s, 100s, 10s and 1s place value grid on their whiteboards. They write the answers in the place value grid, each on a separate line. Did they all get the same answers?

Up for a challenge?

Write 5 x □ = 15, 5 x □ = 150 and 5 x □ = 1500. Ask children to work out the missing numbers.

Now it's the children's turn:

- Challenge children to write out the 4 times table, and at the side the 40 and 400 times tables.
- Go round the group and mark their multiplications as they do them.

S-t-r-e-t-c-h:

If children cope well, ask them to work out the missing numbers in 6 x □ = 12, 6 x □ = 120 and 6 x □ = 1200. Encourage them to test their answers.

Things to remember

Remember that to multiply by 40 we can multiply by 4, and then by 10. Ask children to come up with a rule for multiplying by 400.

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

Resources	**Outcomes**
• Mini whiteboards and pens • Large sheets of paper	1. Children can use known times tables and place value to multiply, e.g. 4 x 3, 4 x 30, and 4 x 300. 2. Children begin to use known times tables and place value to solve problems.

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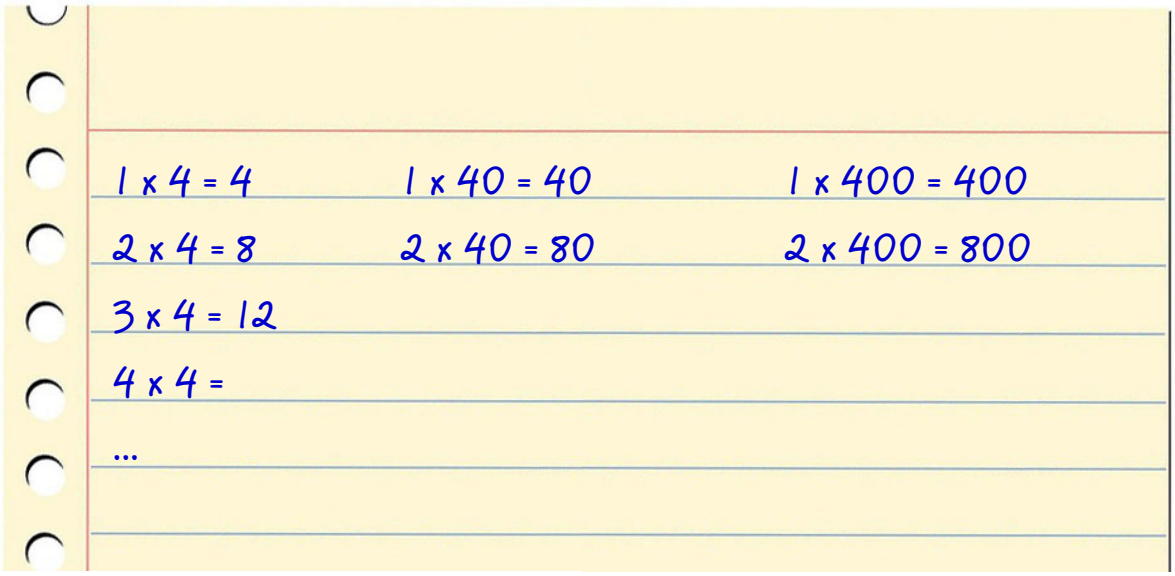
Work in pairs

Things you will need:
- A pencil
- A large piece of paper

What to do:

- Work in pairs to write out the 4 times table on the left of the piece of paper.
- Next to this write out the 40 times table. Remember - you can multiply by 10 to get the answers.
- Now write out the 400 times table!



S-t-r-e-t-c-h:

Work out the missing numbers.

6 x □ = 12 6 x □ = 120 6 x □ = 1200.

Test out your answers.

Learning outcomes:
- I can use known times tables and place value to multiply, e.g. 4 x 3, 4 x 30, 4 x 300.
- I am beginning to use known times tables and place value to solve problems.