

Expanded Multiplication

	4	5
x		4
<hr/>		
	2	0
1	6	0
<hr/>		
?	?	?

Aim

- I can solve problems with expanded multiplication.

Success Criteria

- I can set out the calculation in columns.
- I can multiply the ones and then the tens.
- I check my answers using the grid method.

Beat the Clock



Your teacher will tell you which columns to complete.
The stopwatch will stop after **5 minutes**.

If you finish before the clock, shout '**finished!**' and your teacher will tell you your time. Write this at the top of the sheet.

When your work is marked your teacher will give you a score.

If you didn't get all the questions right, next time focus on improving your score.

If you got them all correct - well done! Next time try to improve your time or choose a more tricky multiplication table.

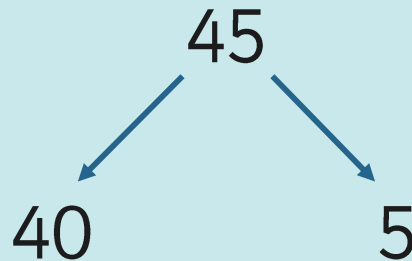
Remember that you are racing against yourself. Don't worry about what your friends are doing!

The Grid Method

Look at the problem.

$$45 \times 4 = ?$$

Partition the large number into tens and ones.



Draw a grid.

X	40	5
4		



The Grid Method

Fill in the grid by solving 40×4 , then 5×4 .

X	40	5
4	160	20

How do we work out 40×4 ?

Remember **Multiplication Magic**

- Draw the wizard's hat to find the multiplication facts.
- Calculate the answer.
- Count the number of zeros in the question.
- Put the zeros onto your answer.



The Grid Method

After you have solved the calculations add the two answers together. This gives you the answer to the problem.

X	40		5	
4	160	+	20	= 180

$$40 \times 4 = 160$$

$$5 \times 4 = 20$$

$$160 + 20 = 180$$

$$45 \times 4 = 180$$

The Grid Method

Look at the problem.

Partition the large number.

Draw a grid and write the numbers into the grid.

Solve the calculations.

Add the answers together.

Write this number at the end of the problem to finish answering the question.

X	40		5
4	160	+	20

$$45 \times 4 = 180$$

+

Expanded Multiplication

	4	5
x		4
<hr/>		
<hr/>		

Work out 5×4 and write the answer here.

Work out 40×4 and write the answer here.

Add them together and write your answer here.

Expanded Multiplication

	3	6
x		4
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Work out 6×4 and write the answer here.

Work out 30×4 and write the answer here.

Add them together and write your answer here.

Expanded Multiplication

	6	5
x		8
<hr/>		
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Work out 5×8 and write the answer here.

Work out 60×8 and write the answer here.

Add them together and write your answer here.

Expanded Multiplication

	7	5	6
x			3
<hr/>			
<hr/>			

Work out 6×3 and write the answer here.

Work out 50×3 and write the answer here.

Work out 700×3 and write the answer here.

Add the columns together and write your answer here.

Multiplication Activities



Expanded Multiplication

I can multiply using the expanded method.

1.	3	6		
x		4		
			(6x4)	
			(30x4)	
			(6x4) + (30x4)	

2.	7	5		
x		8		
			(5x8)	
			(70x8)	
			(5x8) + (70x8)	

Now set these out yourself, make sure you put one number in each square and line up the columns carefully:

3. 62×3	4. 24×8	5. 33×4
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Expanded Multiplication

6. 48×4	7. 81×3	8. 92×3
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9. 50×8	10. 45×8
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Now use the grid method to check each of your answers. (You can use the space below)

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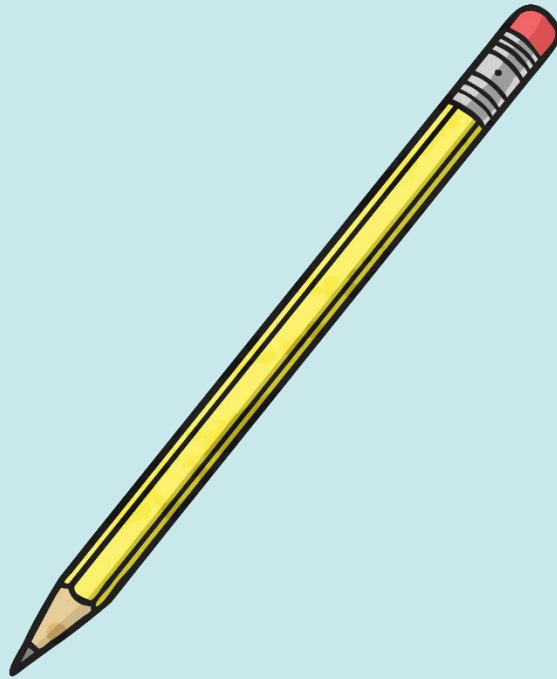
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Class Conundrum



Make up a word problem for 26×4 .

Solve it using the method you have practiced today.



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